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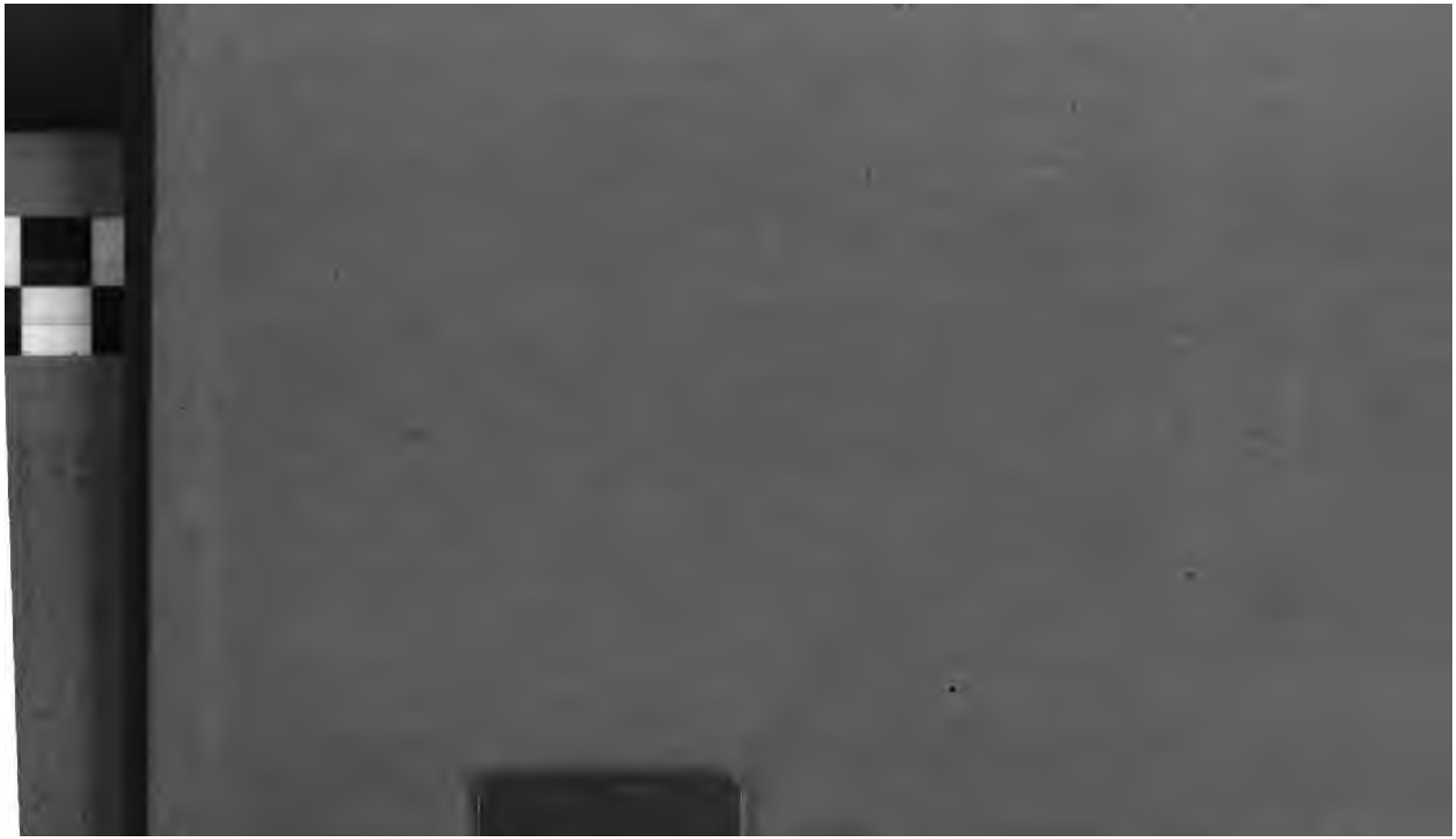
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ASTOR
TILDEN

CATALOGUE

OF THE

CORPORATION, OFFICERS AND CADETS

OF THE

NORWICH UNIVERSITY,

FOR THE

ACADEMICAL YEAR

1845-6.

HANOVER:
PRINTED AT THE DARTMOUTH PRESS.
October, 1846.

GEN. TRUMAN B. RANSOM, PRESIDENT.

TRUSTEES.

HON. JEDEDIAH H. HARRIS.
HON. WILLIAM NOBLE.
HON. DAVID P. NOYES.
JOHN WRIGHT, ESQ.
COL. JONATHAN P. MILLER.
DR. WILLIAM SWEATT.
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WILLIAM TENNEY, ESQ.
HON. GEORGE E. WALES.
GEN. F. W. HOPKINS.
REUBEN DAVIS, ESQ.

III.

FACULTY.

TRUMAN B. RANSOM, M. A., PRESIDENT,
AND PROFESSOR OF NATURAL PHILOSOPHY, PRACTICAL AND MILITARY SCIENCE, AND POLITICAL ECONOMY.

A. LOVELAND, M. A., VICE PRESIDENT.

ALONZO JACKMAN, M. A.,
PROFESSOR OF MATHEMATICS.

BENJAMIN F. MARSH, M. A.,
PROFESSOR OF CIVIL ENGINEERING.

REV. JAMES D. BUTLER, M. A.,
PROFESSOR OF LANGUAGES AND ENGLISH LITERATURE.

CHARLES E. DENISON, A. B.,
TUTOR IN THE LANGUAGES.

PAUL RAYMOND KENDALL,
TEACHER IN THE PREPARATORY DEPARTMENT.

ALONZO JACKMAN, M. A.,
LIBRARIAN.

CATALOGUE.

COLLEGE DEPARTMENT.

NAMES.	RESIDENCE.	
Clinton Adams,	*Rome,*	*N. Y.*
Thomas P. Ashe,	*Demopolis,*	*Ala.*
Julius P. Atwood,	*Monkton,*	*Vt.*
Francis H. Bacon,	*Tunbridge,*	*Vt.*
George W. Balloch, Jr.,	*Cornish,*	*N. H.*
David C. Beattie,	*Salem,*	*N. Y.*
Alexander M. Bennett,	*Westmoreland,*	*N. H.*
Charles E. Blaisdell,	*Norwich,*	*Vt.*
Napoleon Boardman,	*Colchester,*	*Vt.*
Gustave A. Breaux,	*Vermillionsville,*	*La.*
Edwin F. Branch,	*Orwell,*	*Vt.*
Abner K. Brush,	*Monkton,*	*Vt.*
Asahel L. Bundy,	*Norwich,*	*Vt.*
Hosea B. Burnham,	*Auburn,*	*N. H.*
Charles W. Burt,	*Westmoreland,*	*N. H.*
James W. Burton,	*Norwich,*	*Vt.*
Albert Buswell,	*Hartland,*	*Vt.*
A. J. Carmichael,	*Western,*	*N. Y.*
J. S. Carpenter,	*Randolph,*	*Vt.*
Francis Chase,	*Cornish,*	*N. H.*
Nathan B. Cobb,	*Strafford,*	*Vt.*
Gilbert W. Colby,	*Wilmot,*	*N. H.*
Daniel B. Cole,	*Salem,*	*N. Y.*
David L. Morrill Comings,	*Cornish,*	*N. H.*
H. O. Comstock,	*Shelburne,*	*Vt.*
Luther S. Dixon,	*Milton,*	*Vt.*
Frederic P. Drew,	*Waterbury,*	*Vt.*
Charles E. Ensworth,	*Norwich,*	*Vt.*
George W. Ensworth,	*Norwich,*	*Vt.*

V.

NAMES.	RESIDENCE.	
Lewis W. Fling,	*Windsor,*	*Vt.*
Henry Floyd,	*Lebanon,*	*N. H.*
Jesse A. Gove,	*Weare,*	*N. H.*
Chauncey Gray,	*Dorset,*	*Vt.*
Henry L. S. Haskell,	*Weathersfield,*	*Vt.*
William H. H. Hall,	*Chelsea,*	*Vt.*
Henry C. D. Haskell,	*Woodstock,*	*Vt.*
Joseph W. Healy,	*Topsham,*	*Vt.*
Nathaniel Healy,	*Topsham,*	*Vt.*
Enoch G. Hooke,	*Poplin,*	*N. H.*
William F. Howe,	*Tunbridge,*	*Vt.*
William P. Kellogg,	*Norwich,*	*Vt.*
Paul R. Kendall,	*Phillipston,*	*Ms.*
George L. King,	*Shelburne,*	*Vt.*
James E. Lindsay,	*Schroon,*	*N. Y.*
Reuben S. Loveland,	*Norwich,*	*Vt.*
George B. Lyman,	*Norwich,*	*Vt.*
Thomas J. Matteson,	*Rome,*	*N. Y.*
Edward W. Morris,	*Norwich,*	*Vt.*
James G. Murphy,	*Alstead,*	*N. H.*
Asel C. Newman,	*Strafford,*	*Vt.*
Francis H. Nichols,	*Norwich,*	*Vt.*
Caleb Oliver,	*Peterborough,*	*N. H.*
Freeman Parker,	*Washington,*	*Vt.*
Wilder W. Parker,	*Washington,*	*Vt.*
George W. Parker,	*Washington,*	*Vt.*
Benj. W. Parker,	*Boston,*	*Ms.*
John G. Parker,	*Peterborough,*	*N. H.*
James W. Parker,	*Rome,*	*N. Y.*
Lucius D. Pierce,	*Chesterfield,*	*N. H.*
Horace T. H. Pierce,	*Chesterfield,*	*N. H.*
Dunbar R. Ransom,	*Norwich,*	*Vt.*
Asa Reynolds,	*Albany,*	*Vt.*
Reuben P. Riddle,	*Lebanon,*	*N. H.*
Joseph S. Richmond,	*Woodstock,*	*Vt.*
Calvin L. Robinson,	*Reading,*	*Vt.*
Truman L. Slayton,	*Woodstock,*	*Vt.*

NAMES.	RESIDENCE.	
Judson Slafter,	*Norwich,*	*Vt.*
George C. Smith,	*Meriden,*	*N. H.*
John V. N. Standish,	*Woodstock,*	*Vt.*
Hosea C. Steele,*	*Boston,*	*Ms.*
H. Stone,	*Hartford,*	*Vt.*
Charles E. Tilton,	*Sanbornton,*	*N. H.*
Evan W. Thomas,	*North East,*	*Md.*
Andrew J. Todd,	*Calais,*	*Me.*
George Tucker,	*Northfield,*	*Vt.*
John L. W. Tylor,	*Keene,*	*N. H.*
Herman G. Utley,	*Rome,*	*N. Y.*
Jacob A. Vogell,	*Rome,*	*N. Y.*
David H. Wager,	*Rome,*	*N. Y.*
Edmund Weston,	*West Randolph,*	*Vt.*
Solomon M. Whipple,	*Croydon,*	*N. H.*
William M. Williams,	*Reading,*	*Vt.*
Alfred C. Wilson,	*Massena,*	*N. Y.*
Gardner Winslow, Jr.,	*Pomfret,*	*Vt.*
Orvis Wood,	*Milton,*	*Vt.*
Daniel E. Wright,	*Barre,*	*Vt.*
Charles R. Wright,	*West Milton,*	*Vt.*
George H. Wyman,	*Schroon,*	*N. Y.*

COLLEGIATE DEPARTMENT, 88.

* Deceased.

PREPARATORY DEPARTMENT.

NAMES.	RESIDENCE.	
Leonard Blaisdell,	*Norwich,*	*Vt.*
Perkins Burton,	*Norwich,*	*Vt.*
William Coffey,	*Norwich,*	*Vt.*
Samuel H. Currier,	*Norwich,*	*Vt.*
Charles W. Davis,	*Norwich,*	*Vt.*
Charles Davis,	*Cornish,*	*N. H.*

NAMES.	RESIDENCE.	
Charles D. Freeman,	*Norwich,*	*Vt.*
Allen W. Knapp,	*Norwich,*	*Vt.*
Elias Lyman,	*Hartford,*	*Vt.*
Elias Lyman,	*Norwich,*	*Vt.*
Ephraim Morris,	*Norwich,*	*Vt.*
George W. Nevins,	*Norwich,*	*Vt.*
Edwin G. Ransom,	*Norwich,*	*Vt.*
James Rice,	*Hartford,*	*Vt.*
S. Curtis Simonds,	*Norwich,*	*Vt.*
Charles Sweatt,	*Thetford,*	*Vt.*
Leonard Wright,	*Norwich,*	*Vt.*

PREPARATORY DEPARTMENT, 17.

COLLEGE DEPARTMENT, - -	88
PREPARATORY DEPARTMENT, -	17
TOTAL, - - - - - -	105

GRADUATES AT THE COMMENCEMENT, 1846.

Alexander M. Bennett, A. B.
Charles W. Burt, A. B.
Henry L. S. Haskell, A. B.
Lucius D. Pierce, A. B.
W. H. H. Davis, A. M. *in course.*
Henry H. Cary, A. M. *in course.*
Edwin C. Cross, M. D.
F. T. Alba, M. D.

HONORARY DEGREES.

Orestes A. Brownson, LL. D.
Amasa L. Gleason, A. M.
T. J. Nevins, A. M.

VIII.

NORWICH UNIVERSITY.*

PROSPECTUS.

The Trustees of this Institution, having revised and enlarged the course of study, and secured able and permanent instruction in the several departments, beg leave to present an outline of its plan, course of education, general regulations and discipline.

PLAN.

The University was incorporated by the Legislature of Vermont, in 1834, and possesses all the powers and immunities that belong to the highest order of literary institutions in the United States.

The following extracts from the Act of Incorporation, exhibit some of the distinctive features of the University, and the design of its founders.

It is provided in the 5th and 6th sections of that Act, as follows:

Sec. 5.—"That the Trustees aforesaid, shall have and exercise the government of said institution, together with the care and management of all matters and affairs belonging thereto; and shall have power to make and establish all such reasonable and proper laws, rules and regulations, as may be necessary for the governing, instructing and education of the students, and the managing of said institution, and the same may repeal and alter from time to time, as they may see fit; provided the same be not contrary to the constitution and laws of this State or of the United States; and provided also that no rules, laws, or regulations of a sectarian character, either in religion or politics, shall be adopted or imposed; nor shall any student ever be questioned or controlled on account of his religious or political belief by said Board or the Faculty of said institution, or any of them, either directly or indirectly; and said laws, rules and regulations shall be laid before the Legislature of this State, whenever required by that body, and may by them be disallowed, altered or repealed.

Sec. 6.—It is hereby further enacted, that the said Board shall be required to furnish at said institution constantly a course of Military instruction, both theoretical and practical, and also in Civil Engineering, and the practical sciences generally; and the President of said institution with the consent of the Trustees, *shall have power to give and confer all such diplomas, degrees, honors or licenses, as are usually given or conferred in Colleges or Universities*, at their discretion; provided however, that in so doing they shall have respect to the morals and merits of the candidate alone."

* N. B. In order to correct any misapprehension which may have occurred, in consequence of certain advertisements and Prospectuses, in a few of the newspapers, it may be necessary to state here, that there is at Norwich but *one Incorporated Literary Institution*, and *that* is, the "Norwich University." Whatever style may be assumed for any other Institutions at this place, the public may rest assured that they are simply *private schools*, without any corporate existence whatever, or the least shadow of authority to confer degrees.

From these extracts, it will be seen, that the University is based on broad and liberal principles, both in respect to politics and religion, and that it recognizes the creed of no sect or party, thus being modeled after, and corresponding to, the great civil and political institutions of our country, and suited to the character of a free people.

The Trustees cannot doubt, that the character and permanency of our government depends upon the harmony existing between our literary and political institutions; for in this country, the government is the people, and the controlling influence of early education upon a people, is so well known as to have become an axiom.

To give our youth an education that shall be *American* in its character—to enable them to *act* as well as *think*—to *execute* as well as to *conceive*—to "tolerate all opinions when reason is left free to combat them"—to make moral, patriotic, efficient and *useful* citizens, and to qualify them for all those high responsibilities, resting upon a citizen of this free republic—was the design of the founders of this College.

The branches of literature and science, embraced in the college department, are as numerous, and the course of instruction, in the aggregate, as extensive as at any seminary in the United States; though they are in some particulars different—the practical and useful sciences occupying more attention and a larger space, and the ancient languages *less*, than under the old collegiate plan.

While the moral and intellectual faculties are constantly and severely exercised, this is not done at the expense of the physical. Regular and systematic military drills, as well as practical scientific operations, are required of all students as an *exercise;* though these never infringe upon the time usually devoted to study and recitation. The usefulness, importance, and it may be said, the *necessity* of this, or some *similar* feature in our system of education, is abundantly shown by the pale faces, lack of physical energy, and effeminate habits, of *most* of those who receive a *liberal* education.

Besides the proper collegiate department, there is one of Civil Engineering, and one of Military Science; in each of which, a proper course of study is prescribed, which being completed, the student is entitled to a diploma, as proof thereof.

The government and police of the University are strictly military, and the utmost promptness and attention to study and other duties are required of every student.

The reading of the Holy Scriptures, followed by prayer, takes place in the chapel every morning at eight o'clock, and every student is required to be present.

PREPARATORY DEPARTMENT.

The studies in this department are those pursued in most New England Academies. The members of it are allowed to attend

without charge such lectures in the University as are suited to the degree of their acquirements. They are required to be present at prayers in the chapel of the University. If of a proper age, and they so choose, they are furnished with arms and drilled with the University students. In the last case only are they required to dress in uniform.

TERMS OF ADMISSION.

Candidates for admission to the scientific department must be prepared for examination in Geography, Grammar, Arithmetic and Algebra as far as simple equations. Candidates for admission to the classical department, must also be examined in Andrews and Stoddard's Latin Grammar, Andrews' Latin Reader and the first course in some standard Greek Reader. While a member of the University, the student is permitted to pursue such studies as his attainments and abilities may allow, or his plans for future life require; and on leaving the Institution if he has not completed the course in any department so as to receive a diploma, he is entitled to a certificate, signed by the President, stating his progress and attainments.

The best time for entering the University, is at the commencement of the autumn or spring sessions. Students, however, will be admitted at any time.

COURSES OF STUDY

IN THE THREE DEPARTMENTS.

I. COLLEGIATE DEPARTMENT.

This Department embraces the following branches of education, viz:— Grammar, Geography, Algebra, Geometry, Ancient and Modern History, Logic, Rhetoric, Elocution, Composition, Analytical Geometry, Navigation, Surveying, Civil Engineering, Military Science, Natural Philosophy, Astronomy, Descriptive Geometry, Trigonometry, Mensuration, Fluxions, Logarithms, Chemistry, Geology, Mineralogy, Moral Science, Intellectual Philosophy, Natural and Political Law, Natural Theology, Laws of Nations, Political Economy, Evidences of Christianity, Constitution of the United States, Topographical and Military Drawing, and the Ancient and Modern Languages.

STUDIES ARRANGED FOR THE THREE TERMS.

All the branches of the course are taught regularly once a year. They are distributed in the several Terms, as follows:

FALL TERM.	Algebra, Geometry, Trigonometry, Analytical Geometry, Surveying, Engineering, Political Economy, Drawing, Military Science, Intellectual Philosophy, English Grammar, Geology, Natural Theology, Tactics, Greek Grammar and Reader, Cicero's Select Orations, Tacitus, Homer's Iliad.
SPRING TERM.	Fluxions, Natural Philosophy, Natural and Political Law, Laws of Nations, Moral Science, Logic, Ancient History, Algebra, Geometry, Logarithms, Trigonometry, Mensuration, Virgil, (Georgics and Bucolics,) Livy, (four books,) Greek Reader, Xenophon's Cyropædia.
SUMMER TERM.	Evidences of Christianity, Rhetoric, Modern History, Virgil, (Æneid,) Horace, Xenophon's Anabasis, Cyropædia, Chemistry, Navigation, Natural and Political Law, Laws of Nations, Algebra, Geometry, and Natural Philosophy finished.

Exercises in Elocution and Composition are required through the whole year and of every member of the Institution.

For the completion of the foregoing course of studies, it is thought that a period of from three to five years will, in general, be necessary. Much will depend on the attainments of the student at the time of entering, and his application to study.

EXTRA TERM.

For the benefit of that large class of students who are under the necessity of teaching while in the midst of acquiring their own education, the regular terms at this Institution are but three. As, however, a considerable number wish to improve the best season for study, to pursue studies in which they may be behind their classmates, or to prosecute branches not in the prescribed course, instruction is furnished in all departments, at the same rate as in the regular terms, during all the winter, save one week after the close of the autumn term, and one before the beginning of the spring term.

TEXT BOOKS.

MATHEMATICS, PHYSICS, &C.

Davies' Mathematics, Church's Calculus, Enfield's Natural Philosophy, Bakewell's, or Hitchcock's Geology, Turner's Chemistry, Cambridge Topography, Mahan's Civil Engineering, Ransom's Tactics, O'Conner on the Science of War and Fortification.

INTELLECTUAL AND MORAL PHILOSOPHY, &C.

Wayland's Moral Science and Political Economy, Whately's Logic and Rhetoric, Brown's Grammar, Abercrombie's Intellectual Philosophy, Paley's Natural Theology and Evidences of Christianity, Story on the Constitution, Chipman on Natural and Political Law, Vattel's Laws of Nations.

LANGUAGES.

LATIN. Andrews and Stoddard's Grammar, Andrews' Reader, Leverett's Lexicon, Cooper's Virgil, Folsom's Cicero's Select Orations, do. Cicero de Oratore, do. Livy, Gould's or Anthon's Horace, Weise's Tacitus.

GREEK. Bullion's or Kuhner's Grammar, Jacobs' Reader, Donnegan's Lexicon, Cleveland's Xenophon's Anabasis, and the German editions of Thucydides, Homer's Iliad, and Xenophon's Cyropædia.

Adam's Roman Antiquities, Cleveland's or Fisk's Greek do., Anthon's Classical Dictionary, and Butler's Atlas Classica.

HISTORY.

Robbin's Ancient and Modern History.

In addition to the above named work, students are required to read Rollin's Ancient History, Ferguson's Roman Republic, Gibbon's Rome, Russell's Modern Europe, and some approved History of the United States.

II. SCIENTIFIC DEPARTMENT.

This Department embraces the following branches, viz :—Algebra, Geometry, Logarithms, Trigonometry, Mensuration, Surveying, Descriptive Geometry, Analytical Geometry, Fluxions, Natural Philosophy, Chemistry, Geology, Mineralogy, Architecture, Construction of Common Roads, Rail Roads, Canals, Locks, Bridges, &c. ; also Geography, History, and the English Language.

III. DEPARTMENT OF MILITARY SCIENCE.

In addition to what is required in the Department of Civil Engineering, for a Diploma in this Department the student must be correctly instructed in the elementary schools of the Soldier, Company and Battalion ; he must also possess a thorough knowledge of the regular formation of Military Parades ; the turning off, mounting, and relieving of guards and sentinels ; the duties of officers of the guard, officers of the day, and adjutants ; the making out correctly of the different descriptions of Military Reports ; permanent and field Fortifications ; the construction of Marine Batteries ; Artillery Duty ; the principles of Gunnery ; the attack and defence of Fortified Places ; Castrametation ; Ancient Fortification ; the ancient mode of attacking and defending Fortified Places ; Ancient Tactics, particularly those of the Greeks and Romans—together with a description of the organization and discipline of the Phalanx and Legion.

EXTRA BRANCHES AND LECTURES.

The number of regular studies is at all times three for each student. But, that none may be retarded by the backwardness or negligence of their fellows, Cadets are permitted to pursue as many extra branches as they please. The charge for each extra is one dollar per term, except the modern languages, for each of which the charge is two dollars per quarter. Music and Fencing are taught each for four dollars a course.

Annual courses of Lectures are given on the following subjects :—Chemistry, Geography, Constitution of the United States, Military Science, Geology, History, Mineralogy, Political Economy, Natural Philosophy including Astronomy, and National Defence.

COMMENCEMENT.

The annual Commencement is held on the second Thursday in July. A public Examination commences on the Thursday of the week preceding.

QUARTERS AND VACATIONS.

The Academic year is divided into three Sessions of eleven weeks each. The Fall Session commences uniformly on the first Monday in September. There are three vacations in the year ; the first immediately following Commencement, the second following the close of the Fall term, and the third following the close of the extra term. The Quarters of the college year, 1846, commence as follows :—The Fall, Monday, September 7th ; the Winter, Monday, November 30th ; the Spring, Monday, February 8th, 1847 ; and the Summer, Monday, April 26th.

GOVERNMENT.

The executive government is vested in the Faculty. It is the duty of the President to carry into effect the decisions of the Faculty, unless in his opinion there are strong and urgent reasons to the contrary, in which case he may suspend the decision until the next meeting of the Trustees, when the whole subject shall be referred to them for final decision. The Vice President shall preside at the Board of Investigation. In case of the absence or disability of the President, the Vice President will discharge his duties, and will act in his capacity ; he will also designate the presiding officer at any Board of Investigation.

DISCIPLINE.

The discipline is strict, but correct ; in principle, military ; in practice, parental. It is a great and leading object to instil into the minds of the students correct and virtuous principles and motives of action, and induce in them a love for country, and attachment to our republican institutions. Every thing of a sectarian or partizan character in religion or politics is entirely excluded,

and all literary honors are conferred in accordance with scholarship and moral worth alone.

INTERNAL REGULATIONS.

DIVISION OF TIME, &C.

The Students of the University are styled CADETS.

1. The beating of the Revelly is at sunrise throughout the year.

2. From the 20th of March until the 20th of September, breakfast is at 6 o'clock, A. M., and from the 20th of September to the 20th of March, at 7 o'clock, unless otherwise specially directed. Dinner is at 12 o'clock, throughout the year, and supper at 5 o'clock, P. M., unless otherwise directed.

3. From the 20th of March to the 20th of September, the study hours and recitations commence at 8 o'clock, A. M., and continue till 12 o'clock; and again at 1 o'clock, when there is a Roll-call—and continue until 5 o'clock, P. M. From the 20th of September to the 20th of March study hours commence at 9 o'clock, A. M., and continue the same as before stated. During the hours designated for study, every cadet is required to attend to study in his own room, when not engaged in recitations.

4. From the 20th of March to the 20th of September, every cadet is required to be in his quarters by 8 o'clock, P. M., and from the 20th of September to the 20th of March, by 7 o'clock, P. M., at which times there is a Roll-call. At 10 o'clock, the lights in all the rooms are extinguished and every cadet is required to retire to bed. The officer of the day will inspect each room occupied, at 9 P. M., and make a report thereof.

5. Hours for practical scientific operations, for the military exercises, and for field and other duties, are, from time to time, designated by the President.

PROHIBITIONS AND DUTIES.

1. Every Cadet is prohibited going out of the limits of the village at any time, unless with permission, or on duty.

2. Gambling and games of chance of every description, either with or without cards; all profane and vulgar language; every species of irregular or immoral conduct, or of conduct contrary to the true principles of correct military discipline; all scuffling, and all unnecessary noise, at any time or place, are prohibited.

3. Loitering about taverns or stores, or any other places of public resort, is strictly prohibited.

4. Habits of industry and economy are urgently recommended and enforced.

5. Every Cadet is prohibited introducing or bringing spirituous liquors of any kind into the quarters, or keeping or allowing any to be kept in his room.

6. Every Cadet is required to attend to his duties, both as to time and place, with the greatest promptitude and precision, and when on duty of any

kind, the strictest attention to the correct, efficient and energetic discharge of such duty is required.

7. Neatness and propriety in dress is required, and the arms and accoutrements must be kept in perfect order.

8. Each Cadet is required to make good all damages done to his arms and accoutrements, instruments and quarters, or their appurtenances; and when it shall appear that such damage was wantonly committed, he will further be dealt with in such a manner as the circumstances of the case may require.

9. The utmost neatness, both within, and in the vicinity of the quarters, is required.

10. Any Cadet who shall join in or countenance any combination whatever, calculated to innovate upon the discipline of the Institution, or to deter others from the full discharge of their duties agreeably to the strict principles of military discipline, will be dealt with according to the circumstances of the case.

11. Any Cadet who shall be guilty of prevarication or falsehood, shall be punished.

12. Discharging fire-arms, except in the regular routine of duty, firing crackers, or disturbing the peace in any manner whatever. is strictly prohibited.

13. Any Cadet who shall knowingly and wilfully disobey any orders of the President, will be dealt with according to the circumstances of the case.

14. Any Cadet who shall, by any means whatsoever, endeavor to create parties or divisions in the Institution, or to excite local feelings or sectional jealousies among the Cadets will be dealt with according to the circumstances of the case.

15. Whenever a Cadet is dismissed from the University, his name will be so recorded on the general roll, and in the next annual Catalogue.

16. No Cadet is permitted to teach any branch named in the Catalogue except under the direction of the Faculty.

MILITARY DUTIES AND INSTRUCTION.

1. Every Cadet is required to appear at all dress parades, as well as on guard, in complete uniform, with his clothes, arms and equipments in perfect order, under penalty of reprimand, suspension or dismission, according to the circumstances of the case.

2. Every Cadet is required to repair to the place of parade drill, or other duty, promptly at the time appointed; and when on duty, the strictest attention to the correct and soldier-like discharge of such duty is required, under the penalties of the preceding article.

3. The Cadets, in rotation, discharge the duties of non-commissioned officers, officers of the guard, and officers of the day, of adjutants and commandants of parade; and for the purpose of rendering them more perfect in their military duties, occasionally act as military instructors.

4. Whenever a Cadet is acting in any official capacity, he is required to discharge all his duties agreeably to the principles and practice of strict military discipline, and with all that gentlemanly independence becoming a soldier, under penalty of being reduced to the ranks, or otherwise dealt with, according to the circumstances of the case.

5. Whenever a Cadet is in the exercise of any command, he must be treated with the most perfect respect, and implicit obedience yielded to his orders by all concerned.

6. In the military instruction, the same system of tactics is adopted, as in the army of the United States.

7. All special regulations are published on parade, in the usual military forms of orders.

DRESS.

Every Cadet is required to wear the uniform of the University, when on duty.

PUBLIC WORSHIP.

Every Cadet is required to attend Church on the Sabbath. The reading of the Holy Scriptures is likewise urgently recommended to all during their leisure hours generally, but on Sundays particularly.

BOARDING.

The Cadets board in private families in the village, or in clubs, under the general supervision of the President.

CLUBBING OR SELF-BOARDING is, to a considerable extent, practiced, and recommends itself from its comparative cheapness. The expenses for board of those who live in this manner, vary from 50 cents to one dollar per week; in no case need they exceed one dollar.

VACATIONS AND FURLOUGHS.

1. Every Cadet is required to report himself immediately after the expiration of the vacation or of his furlough: and any one who does not thus report himself, unless he give satisfactory excuse for his absence, will be dealt with according to the circumstances of the case.

2. As frequent absences are very injurious to the progress of students, by interrupting their studies and the regular order of their duties, no furlough or leave of absence will be given to any Cadet in term time, except in case of sickness or other urgent necessity. No deduction will be made in the University expenses when a student leaves, as for absence in term time, except in cases of sickness.

3. All applications must be made directly to the President.

EXPENSES.

Tuition per quarter in University, for regular studies,	$6,00
Room-rent, per quarter,	1,50
Incidental expenses, per quarter,	1,00
Board and washing in private families,	1,25 to 1,50
Tuition, per term, in Preparatory department,	$3,50

Other incidental expenses, as for books, furniture, travelling, expenses in societies, &c., vary according to circumstances, and the habits of the Cadets.

REMARKS.

Every student reciting to a Professor in a University study will be considered a University student and charged accordingly.

All bills for tuition, room-rent and incidentals, must be paid quarterly, *in advance*: and no Cadet will receive a diploma or discharge, or be permitted to leave the Institution, until his bills are all paid, or settled in a manner satisfactory to the Treasurer.

The Treasurer will attend to the settlement of all accounts of the Cadets, and will receive all moneys due for tuition, room-rent, diplomas and incidental expenses.

Parents and guardians are requested not to furnish their sons and wards with money, which may be perverted to extravagance and induce habits of bad economy and insubordination.

NORWICH UNIVERSITY

1861-62.

W. G. Bell

CATALOGUE

OF THE

CORPORATION, OFFICERS, AND CADETS

OF

NORWICH UNIVERSITY,

FOR THE ACADEMICAL YEAR

1861-62.

NORWICH, VT.
PRINTED FOR THE UNIVERSITY.
Nov.—1861.

CORPORATION.

TRUSTEES.

REV. EDWARD BOURNS, LL. D., EX OFFICIO, PRESIDEN
GEN. WILLIAM E. LEWIS, SECRETAR
F. L. OLDS, TREASURE

HON. AARON LOVELAND,	*Norwich.*
HON. FRANKLIN PIERCE,	*Concord, N. H.*
GEN. JAMES T. PRATT.	*Rocky Hill, Ct.*
HON. REUBEN DAVIS,	*Cornish, N. H.*
COL. SAMUEL NUTT,	*Hartford.*
HORACE WEBSTER, Esq., LL. D.,	*New York City.*
GEN. WILLIAM E. LEWIS,	*Norwich.*
JULIUS Y. DEWEY, Esq., M.D.,	*Montpelier.*
HON. STEPHEN THOMAS,	*West Fairlee.*
HON. WILLIAM B. LAWRENCE.	*Newport, R. I.*
HON. EDMUND WESTON,	*Randolph.*
REV. GEORGE B. MANSER, D.D.,	*Bennington.*
HON. TIMOTHY P. REDFIELD,	*Montpelier.*
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HON. NATHANIEL B. BAKER,	*Clinton, Iowa.*
HON. DUDLEY C. DENISON,	*Royalton.*
HON. WILLIAM HEBARD,	*Chelsea.*
GEORGE R. CHAPMAN, ESQ.	*Woodstock.*
R. RICHARDSON, ESQ.,	*Montpelier.*
H. BLOOD, ESQ.,	*Norwich.*

FACULTY.

REV. EDWARD BOURNS, LL. D., PRESIDENT,
AND PROFESSOR OF MORAL SCIENCES, ANCIENT LANGUAGES AND LITERATURE.

ALONZO JACKMAN, A. M.,
BRIGADIER GENERAL V. V. M.,
PROFESSOR OF MATHEMATICS, NATURAL PHILOSOPHY, MILITARY SCIENCE AND TACTICS.

THOMAS R. CROSBY, M. D.,
PROFESSOR OF ANATOMY, PHYSIOLOGY AND NATURAL HISTORY.

CLINTON S. AVERILL, A. M.,
ACTING PROFESSOR OF NATURAL SCIENCES.

GEORGE BAILLARD,
PROFESSOR OF MODERN LANGUAGES, AND LINEAR AND ARCHITECTURAL DRAWING.

SAMUEL W. SHATTUCK, B. S.,
TUTOR IN MATHEMATICS AND MILITARY TACTICS.

ALONZO JACKMAN, A. M.,
LIBRARIAN.

ADJUTANTS.

THOMAS W. EAYRE.	-	SPRING TERM, 1861.
———— ————,		SUMMER TERM, 1861.
RODY PATTERSON, JR.,	-	FALL TERM, 1861.

ROSTER.

Name.	Residence.
Abbott, Lemuel Abijah,	*Barre.*
Allen, Charles Parsons,	*Irasburgh.*
Allen, Ira Hayden,	*Irasburgh.*
Allen, Lorenzo D.,	*Chelsea.*
Alvord, Henry Elijah,	*Greenfield, Ms.*
Ashcroft, Charles Edward,	*Boston, Ms.*
Atwood, Charles Henry,	*St. Albans.*
Babbitt, Elbridge Harris,	*West Randolph.*
Bailey, George Alonzo,	*Woodstock.*
Barrett, Curtis Sawyer,	*South Strafford.*
Bascom, Warren Franklin,	*Whitehall, N. Y.*
Buel, James Whitcomb,	*Keene, N. H.*
Bush, Charles dmund,	*Shoreham.*
Cady, Samuel A.,	*Windsor.*
Call, Norman,	*New Castle, Me.*
Cargill, Charles Guy,	*Hartford.*
Chaffin, William Henry,	*Claremont, N. H.*
Chandler, Edward A.,	*Pomfret.*
Chapin, Charles Jones,	*Brattleboro.*
Chase, John,	*Langdon, N. H.*
Clapp, Stephen Rowe, Jr.,	*Boston, Ms.*
Cocroft, James H.,	*Staten Island, N. Y.*
Converse, George Albert,	*Norwich.*

Name.	Residence.
Dewey, William Strong,	*Quechee.*
Dodge, William Aseph,	*Post Mills.*
Eayre, Thomas W.,	*Vincent Town, N. J.*
Estey, Julius Jacob,	*Brattleboro.*
Ewart, James K.,	*Sparta, Ohio.*
Folsom, George Albert,	*Sunrise City, Min.*
Fuller, Pyron,	*Lebanon, N. H.*
Gilbreth, Fred William,	*Augusta, Me.*
Goodwin, William Stone,	*Boston, Ms.*
Granger, E. M.,	*Pittsford.*
Gray, John Smith,	*Walpole, Ms.*
Gregory, Charles Dan,	*Waterford.*
Hall, Josiah,	*Westminster.*
Hastings, Addison Tyler,	*Medway, Ms.*
Haven, William,	*Sanbornton Bridge, N. H.*
Hays, William Bratton, Jr.,	*Pittsburgh, Pa.*
Hazelton, Walter Scott,	*Strafford.*
Hebard, William, Jr.,	*Chelsea.*
Henry, Horace Chapin,	*North Bennington.*
Hitchcock, Elton P.,	*Pittsford.*
Hopkins, George Washington,	*Lowell, Ms.*
Hoyt, Charles Arthur,	*Deerfield, Ms.*
Hoyt, William Romeo,	*St. Albans.*
Hutchinson, Alonzo B.,	*Norwich.*
Jones, Edward T.	*Chelsea.*
Kellogg, Theodore Harvey,	*Hillsborough, O.*
Kimball, Lewis, Jr.,	*Nashua, N. H.*
Lasier, Thomas Jefferson,	*Freeport, Ill.*
Lee, Douglass,	*Lenox, Ms.*
Lord, Robert Chandler,	*Boston, Ms.*
McCulloch, Fred Nelson	*Ft. Wayne, Ind.*

Name.	Residence.
Mead, William Rutherford,	*Brattleboro'.*
Metcalf, Ralph,	*Claremont, N. H.*
Metcalf, William Henry,	*Damariscotta, Me.*
Millington, Gilbert David,	*South Shaftsbury.*
Moores, Frederic Walter, Jr.,	*Boston Navy Yard, Ms.*
Morey, Arthur,	*Strafford.*
Morse, Henry Clay,	*Newbury.*
Moses, Rufus Leander,	*Norwich.*
Nichols, Edward Payson,	*New Castle, Me.*
Nichols, Henry B.,	*Norwich.*
Norris, Charles Frederic,	*Damariscotta, Me.*
Noyes, Edward Horatio,	*Springfield, Ms.*
Ober, George Hawes,	*Wardsboro.*
Ordway, Leonard Sanborn,	*Freeport, Ill.*
Osgood, Charles Henry,	*Wentworth, N. H.*
Page, A. H.,	*Warren, Pa.*
Parmenter, Daniel Webster,	*Framingham, Ms.*
Parsons, John W.,	*Rye, N. H.*
Patterson, Rody, Jr.,	*Pittsburgh, Pa.*
Peirce, Frank C.,	*Augusta, Me.*
Phelps, Dudley Farley,	*Boston, Ms.*
Phillips, Henry Moses,	*Deerfield, Ms.*
Phillipes, Walter A.,	*Montpelier.*
Pillsbury, James E.,	*Nobleboro', Me.*
Post, Henry Gaylord,	*Wallingford.*
Potter, Joel Sanford,	*Whitehall, N. Y.*
Putnam, George Frederick,	*Croydon, N. H.*
Rand, Frederick Henry,	*Boston, Ms.*
Rich, Clayton Eugene,	*Shoreham.*
[redacted]	[redacted]

Name.	Residence.
Sabine, Albert,	*Woodstock.*
Sabine, John,	*Hartland.*
Sawyer, Francis Asbury,	*Dover, N. H.*
Shattuck, Abbott Allen,	*Groton, Ms.*
Slayton, Henry L.,	*Lebanon, N. H.*
Sleeper, Charles,	*St. Albans, Me.*
Sleeper, Van Buren,	*Chelsea.*
Smith, Elias Frost,	*Meriden, N. H.*
Smith, George W.,	*Lebanon, N. H.*
Steele, Charles Edw.,	*Windsor.*
Stoughton, Charles B.,	*Bellows Falls.*
Sumner, James Breckenridge,	*Dalton, N. H.*
Tanco, Nicholas,	*Matanzas, Cuba.*
Tanner, Robert,	*Pittsburgh, Pa.*
Thompson, John B.,	*Greenfield, Ms.*
Thorndike, Charles Francis,	*Beverly, Ms.*
Thorndike, Thomas Stephens,	*Beverly, Ms.*
Tillinghast, Charles Foster, Jr.,	*Pittsburgh, Pa.*
Vernam, William Spencer,	*Albany, N. Y.*
Walcott, Ellis Pitcher,	*Utica, N. Y.*
Walcott, Franklin Hamilton,	*N. Y. Mills, N. Y.*
Washburn, J. W. F.,	*Montpelier.*
White, Arthur Watson,	*Columbus, Ohio.*
Whitmore, Adin Hamlin,	*Springfield.*
Whitney, Frank,	*Boston, Ms.*

Whole Number, - -	111.
Entered Fall Term, 1861, -	56.

Besides the above, about sixty men, not Cadets of the Institution, have received instruction in Military Tactics.

DRILL SERGEANTS

FOR THE FALL TERM OF 1861,

Alvord, Henry Elijah,	Kellogg, Theodore Harvey,
Atwood, Charles Henry,	Moores, Frederic Walter, Jr.,
Bush, Charles Edmund,	Moses, Rufus Leander,
Call, Norman,	Patterson, Rody, Jr.,
Converse, George Albert,	Rich, Clayton Eugene,
Hastings, Addison Tyler,	Sabine, Albert,
Hays, William Bratton, Jr.,	Steele, Charles Edward,
Hoyt, William Romeo,	Tillinghast, Charles Foster.

OFFICERS OF PASSAGES

OF THE "SOUTH BARRACK." FOR THE FALL TERM OF 1861.

No. 1.	Bush, Charles Edmund.
2.	Alvord, Henry Elijah.
3.	Atwood, Charles Henry.
4.	Hays, William Bratton, Jr.

GRADUATING CLASS, 1860.

Name.	Residence	
Bascom, Gustavus M.,	*Columbus, Ohio.*	*B. S.*
Field, George W.,	*Northfield, Ms.*	*B. S.*
Morton, Charles,	*Boston, Ms.*	*B. S.*
Shattuck, Samuel Walker,	*Groton, Ms.*	*B. S.*
Smith, T. Sumner,	*Claremont, N. H.*	*B. S.*

CALENDAR.

1861

Sept. 12. First Term begins—Thursday evening.
Dec. 19. First Term ends—Thursday morning.

WINTER VACATION, FOUR WEEKS.

1862.

Jan. 16. Second Term begins—Thursday evening.
April 24. Second Term ends—Thursday morning.

SPRING VACATION, TWO WEEKS.

May 8. Third Term begins—Thursday evening.
Aug. 14. Commencement—Thursday.

SUMMER VACATION, FOUR WEEKS.

Sept. 11. First Term begins—Thursday evening.
Dec. 18. First Term ends—Thursday morning.

REMARKS.

This University differs from most colleges in two respects.

These are, its double system of study, consisting in an *Academic*, and a *Scientific* course; and its department of Military Science.

The *Academic* course comprises those studies usually pursued in other colleges; the *Scientific* embraces, Mathematics, Natural Sciences, Belles Lettres, Surveying, and Engineering. *Four* years are required to complete the former, and *three*, the latter course of study.

Students are also admitted to take a *partial* course in either department, for which a certificate will be given stating the branches they may have studied.

The studies are so arranged that the students in the two departments recite together in all the subjects which are common to both. Students in both departments, are regarded, and treated in all respects as equals, in their respective classes. The Classical have no privileges which are not fully enjoyed by the Scientific.

Students may enter the class for which they are fitted, at any time, *especially* at the middle of the Spring Term, when a class commences in Algebra and Geometry.

Those who are sufficiently prepared to join advanced classes *are always allowed to do so*, after a satisfactory examination in the studies already completed by that class.

The department of Modern Languages is under the direction of an accomplished instructor. The drill in these languages is thorough, and such as to enable the student, with proper application, to speak them fluently.

Instruction is given in Linear and Architectural Drawing;—Architecture of Fortifications, Ancient and Modern;—and Classic, Gothic and Renaissance Ornament. Surveying and Engineering are taught practically.

The feature, however, which more than any other distinguishes Norwich University from other Collegiate institutions, is the department of Military Science and Tactics.

Agreeably to the provisions of its charter, the students are under Military Discipline—are called Cadets—dress in uniform, and are instructed in Infantry, Rifle and Artillery Drill, Bayonet Exercise, Fortification, Reconnoissance, Castrametation, Guard and Out-Post duty, &c., &c. All the arms and equipments necessary for drills are furnished by the State of Vermont.

The military feature of this institution is one which should particularly commend it to the notice, and patronage of the public at this time. The want of men skilled in Military Science and Tactics, to take command of volunteer forces, and discipline them into effective soldiers, has been severely felt in organizing the present army of the United States. The reverses with which it has met are, without doubt, owing largely to this cause. To guard against this defect in the future, it is now generally felt, that young men should be educated thoroughly in every department of Military Science. In times of peace this knowledge would not incapacitate men for, nor interfere with any other business;—while in times of war, it would become invaluable to the country in training an army for efficient service.

Peaceful citizens can thus be taken from their ordinary pursuits, and with little delay, made efficient and able to endure the hardships of a campaign.

The value of officers educated at West Point is well known. West Point, however, can educate but a limited number, a mere fraction of those, who wish and ought to receive a military education. *The many* must therefore seek it in other institutions. It is believed that this College, is the only one in New England where it can now be obtained.

But military discipline is desirable in other respects than those already named. It *strengthens the body*, gives to youth a vigorous constitution, and a manly bearing, and fits them to serve their country according to the spirit of the Constitution of the United States, not alone on the field of battle, but everywhere, in all employments and departments of life, which demand strength, energy and endurance. Its regular and systematic training of the body, is highly conducive to perfect physical development, and the preservation of health. Many instances can be shown in which broken health and debilitated constitutions have been restored, and invigorated, health and strength acquired, when physicians and friends had begun to despair, and this by means agreeable in themselves, and far less costly than doctor's bills.

Thoughtful men have long since seen the necessity for training the body as well as the mind. They have long since known that however strong the mind, it can do little without strength of body. The public have at length begun to perceive and acknowledge this truth. Gymnasiums are now considered almost as needful in Institutions of learning as Philosophic apparatus. This is well; every village academy should have its gymnasium; but the gymnasium does not fully accomplish the desired object. It does not educate the bodies of all. The strong, vigorous, healthy youth will use the gymnasium, but those who need it most will shun it. The delicate, dyspeptic, dwarfed, moping, over-studious youth must be compelled to take exercise; for him the drill—the regular drill under an officer—made compulsory—the drill is the only means as yet discovered for him.

The discipline though strict, is not oppressive, students of all departments and classes being treated with the most scrupulous impartiality. The object is to promote study, preserve order, and improve the morals.

The immediate supervision of the discipline and all matters pertaining to order is under an *Officer of the Barracks* whose rooms are in the Quarters. Under him is a cadet, chosen for his experience and efficiency, called the *Adjutant*, who assists him in his duties. Besides these, the Cadets themselves act in rotation as *Officer of the day*. The duty of the *Officer of the day* is, to attend at all roll calls, mark absences and improprieties, inspect rooms and report anything that he may see amiss during his term of office. As all hold this office in their turn, there is nothing in it to make it odious or irksome.

The students room in the University building, so long as the accommodations there are sufficient, two generally occupying each room. They furnish their own rooms,—this is often done, however, by purchasing, at reduced prices, furniture from those who have no longer use for it.

The Academic year is divided into three Terms. *Charges* for the year are divided into *three* payments.

COLLEGIATE COURSE OF STUDY.

YEAR I. YEAR II. YEAR III. YEAR IV.

FALL.	SPRING.	SUMMER.
Algebra. Roman History. Virgil, Lat in Grammar.	Algebra finished. Geometry commenced. History of Greece, Xenophon's Anabasis. Arnold's Latin Prose Composition.	Geometry finished. English History, Horace's Odes, Prosody, Herodotus commenced. Arnold's Latin Prose Composition.
Chemistry. Campbell's Rhetoric, Herodotus, Horace's Satires, Cicero's, Brutus, Homer, Arnold's Greek Prose Composition.	Trigonometry. Mensuration, Des. Geometry, Geology, Livy, Arnold's Gr. Prose Composition.	Surveying, Navigation, Shades and Shadows, Homer, Mineralogy.
Analytical Geometry, Logic. Plautus' Captivi, Terence, Roman Antiquities.	Differential and Integral Calculus, Physiology, Natural History, Euripides, Cicero De Oratore, Grecian Antiquities.	Analytical Mechanics commenced. Laws of Nations, Juvenal and Persius.
Analytical Mechanics completed. Constitution of United States, Political Economy commenced, Cousin's Psychology. Demosthenes and Longinus.	Acoustics and Optics, Mahan's Intellectual Philosophy, Stewart's Philosophy of the Mind. Political Economy completed, Kame's Elements, Tacitus, Cicero's Tusculan Questions.	Astronomy. Civil Engineering and Field Practice. Kame's Elements, Whately's Rhetoric.

NOTE—Recitations every Monday morning in Paley's Natural Theology. Wayland's Moral Science, or other books of a religious or moral character.
Themes and Declamations weekly, throughout the Course.
Modern Languages taught as an extra. ☞

SCIENTIFIC COURSE OF STUDY.

YEAR I.			YEAR II.			YEAR III.		
FALL.	SPRING.	SUMMER.						
ebra, Geometry, Roman History.	Algebra, Geometry, Trigonometry, Mensuration, Descriptive Geometry, History of Greece.	Algebra, Geometry, Surveying, Navigation, Shades and Shadows, English History.						
lytical Geometry, Campbell's Rhetoric, Chemistry.	Differential and Integral Calculus, Geology, Physiology, Natural History.	Analytical Mechanics commenced, Mineralogy, Laws of Nations.						
Analytical Mechanics completed, Logic, Constitution United States, Political Economy commenced, Cousin's Psychology.	Acoustics and Optics, Political Economy completed, Mahan's Intellectual Philosophy, Stewart's Philosophy of the Mind, Kames' Elements.	Astronomy, Civil Engineering and Field Practice, Kames' Elements, Whately's Rhetoric.						

TE—Recitations every Monday morning in Paley's Natural Theology, Wayland's Moral Science, or other books of a religious or moral character.
Themes and Declamations weekly, throughout the Course.
Modern Languages taught as an extra.

ADMISSION.

Candidates for admission must be at least fourteen years old, and able to sustain a satisfactory examination in Arithmetic, Algebra through Simple Equations, English, Latin and Greek Grammar, Latin Reader, Sallust, Cicero's Select Orations, First Six Books of Virgil, Four Books of Xenophon's Anabasis, and Homer's Iliad, two Books, or its equivalent.

Candidates for admission into the Scientific Department are required to sustain a satisfactory examination in English Grammar, Geography, Arithmetic, and through Equations of the First Degree.

GOVERNMENT.

The Executive Government is vested in the Faculty.

DISCIPLINE.—The discipline is military in principle and form—*actual merit* is the only criterion of scholarship and character.

TEXT BOOKS.

GREEK.—Xenophon's Anabasis; Herodotus; Homer's Iliad; Greek Tragedies; Demosthenes De Corona; Xenophon's Memorabilia; Longinus; Plato's Defence of Socrates; Liddell and Scott's Greek Lexicon; Crosby's Greek Grammar.

LATIN.—Lincoln's Livy; Horace; Captivi of Plautus; Tacitus; Terence; Cicero De Oratore, and Tusculan Questions; Cicero's Brutus; Leverett's Lexicon.

MATHEMATICS.—Algebra, Davies' Bourdon; Geometry, Davies' Legendre; Trigonometry, Davies' Legendre; Surveying, Davies'; Navigation; Analytical Geometry, Descriptive Geometry, Dif. and Int. Calculus, Shades and Shadows from Davies' Course; Mahan's Civil Engineering; Bartlett's Analytical Mechanics, Acoustics and Optics, and Astronomy.

NATURAL SCIENCES.—Lyell's Geology; Silliman's Chemistry; Dana's Mineralogy.

HISTORY.—Smith's Greece and Liddell's Rome; Hume's England.

RHETORIC.—Whately's Rhetoric; Themes and Declamations; Campbell's Rhetoric.

PHILOSOPHY.—Whately's Logic; Wayland's Moral Science; Cousin's Psychology; Mahan's Intellectual Philosophy; Stewart's Philosophy of the Mind; Say's Political Economy; Kames' Elements; Paley's Evidences.

GENERAL REGULATIONS.

The Students of the University, in their military capacity, are styled CADETS.

Times for the commencement and continuation of study hours, for roll-calls, and meals, are regulated by the Faculty.

Hours for practical scientific operations, for the military exercises, and for field and other duties, are from time to time, designated by the Faculty.

PROHIBITIONS AND DUTIES.

1. Every Cadet is prohibited going out of the limits of the village at any time, unless with permission, or on duty.

2. Gambling, or games of chance of any description, with or without cards; scuffling, and unnecessary noise, are prohibited. Every species of irregularity and immorality; in short, everything contrary to the true principles of gentlemanlike conduct and military discipline is forbidden, and will be severely punished.

3. Loitering about taverns, or stores, or any other places of public resort, is strictly prohibited.

4. Habits of industry and economy are urgently recommended and enforced.

5. Every Cadet is prohibited introducing or bringing spirituous liquors of any kind into the quarters, or keeping or allowing any to be kept in his room, on pain of expulsion.

6. Every Cadet is required to attend to his duties both as to time and place, with the greatest promptitude and decision; and when on duty of any kind the strictest attention to the correct, efficient and energetic discharge of such duty is required.

7. Neatness and propriety in dress is required, and the arms and accoutrements must be kept in perfect order.

8. Each Cadet is required to make good all damages done to his arms and accoutrements, instruments and quarters, or their appurtenances.

9. The utmost neatness, both within, and in the vicinity of the quarters is required.

10. Discharging fire-arms, except in the regular routine of duty, or disturbing the peace in any manner whatever, is strictly prohibited.

11. Strict obedience to his superior officers is at all times required of every Cadet.

12. No Cadet is permitted to instruct while in the University, except under the direction of the Faculty.

13. Smoking tobacco is considered unbecoming a Cadet. The public practice of it is strictly prohibited.

MILITARY DUTIES AND INSTRUCTION.

1. Every Cadet is required to appear at all dress parades, as well as on guard, in complete uniform, with his clothes, arms and equipments in perfect order.

2. The Cadets, in rotation, discharge the duties of officers, non-commissioned officers, officers of the guard, officers of the day, and commandants of parade.

3. Whenever a Cadet is acting in any official capacity, he is required to discharge all his duties agreeably to the principles and practice of strict military discipline, and with the gentlemanly independence becoming a soldier.

4. Whenever a Cadet is in the exercise of any command, he must be treated with the most perfect respect, and implicit obedience yielded to his orders by all concerned.

5. In the military instruction, the same system of tactics is adopted as in the Army of the United States.

DRESS.

Every Cadet is required to provide himself with the uniform dress of the University, and at all times to be neatly and appropriately dressed. After the term in which he enters, every Cadet is required to wear the uniform of the University during term time, whenever he goes beyond the limits of the Quarters, unless special permission to the contrary is given.

PUBLIC WORSHIP.

Every Cadet is required to attend Church on the Sabbath.

VACATIONS AND FURLOUGHS.

1. Every Cadet is required to report himself immediately on his return, after the expiration of the vacation or of his furlough, and is from that time considered to be on duty. Absence, without sufficient excuse, beyond that time will incur demerit marks.

2. As frequent absences are very injurious to the progress of students, by interrupting their studies, and the regular order of their duties, no furlough will be given to any Cadet in term time, except in cases of sickness or other urgent necessity.

Parents and guardians are requested particularly to have regard to this regulation. Nothing is more injurious to the progress of the student than frequent absences during term time.

EXPENSES.

TUITION, per term, in University, for regular studies,	$14.50
ROOM-RENT, per term, - - -	3.50
LIGHTS AND FUEL, per week, about - -	.30
BOARD, in private families, per week, -	2.00 to 2.50
MODERN LANGUAGES, per term, *each extra*, -	5.00
DRAWING, per term, *extra*, - - -	4.00

Other incidental expenses, as for books, furniture, travelling expenses, in societies, &c., vary according to circumstances, and the habits of the Cadets.

REMARKS.

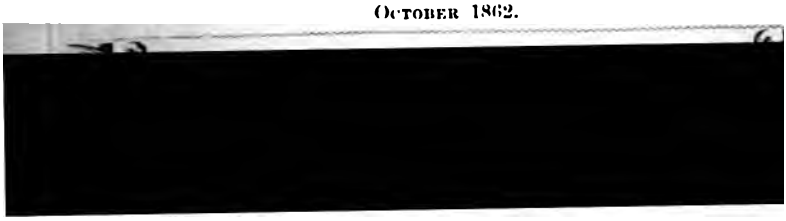
1. All certificates given at the time of dismission, will be made out strictly according to truth and the *real standing* of the student.
2. Bills for tuition and room-rent payable in advance.
3. Parents and guardians are requested not to furnish their sons and wards with more money than may be necessary for the discharge of their regular bills. Nothing tends more to demoralize students and make them idle than too large an allowance of pocket-money.
4. No deduction made in charges when a student leaves, except in cases of sickness.

3

NORWICH UNIVERSITY

1862-63.

OCTOBER 1862.



CATALOGUE

OF THE

CORPORATION, OFFICERS, AND CADET

OF

NORWICH UNIVERSITY

FOR THE ACADEMICAL YEAR

1862-63.

NORWICH, VT.
PRINTED FOR THE UNIVERSITY.
OCTOBER, 1862.

CORPORATION.

TRUSTEES.

Rev. EDWARD BOURNS, LL. D., EX OFFICIO,		PRESIDE
Rev. JOSIAH SWETT,	*Bethel*,	SECRETA
F. L. OLDS,		TREASUR

Gen. JAMES T. PRATT,	*Rocky Hill, Ct,*
Hon. REUBEN DAVIS,	*Cornish, N. H.*
Col. SAMUEL NUTT,	*Hartford.*
HORACE WEBSTER, Esq., LL. D.,	*New York C*
Gen. WILLIAM E. LEWIS,	*Norwich.*
JULIUS Y. DEWEY, Esq., M.D..,	*Montpelier.*
Hon. STEPHEN THOMAS,	*West Fairlee.*
Hon. EDMUND WESTON,	*Randolph.*
Rev. GEORGE MANSER, D. D.,	*Bennington.*
Hon. TIMOTHY P. REDFIELD.	*Montpelier.*
Rev. JOSIAH SWETT, A. M.,	*Bethel.*
Rev. GEORGE M. RANDALL, D. D.,	*Boston. Mass.*
Hon. DUDLEY C. DENISON,	*Royalton.*
Hon. WILLIAM HEBARD,	*Chelsea.*
GEORGE R. CHAPMAN. Esq.,	*Woodstock*
R. RICHARDSON, Esq.,	*Montpelier.*
H. BLOOD, Esq.,	*Norwich.*
CURTIS BACON, Esq..	*Hartford, Ct,*
Rev. MALCOLM DOUGLASS	*Windsor.*
Hon. A. P. HUNTON,	*Bethel.*
HENRY O. KENT, Esq.,	*Lancaster, N. H*

FACULTY.

REV. EDWARD BOURNS, LL. D., PRESIDENT,
AND PROFESSOR OF INTELLECTUAL, MORAL AND POLITICAL PHILOSOPHY.

ALONZO JACKMAN, LL. D.,
GENERAL V. V. M.
PROFESSOR OF MATHEMATICS, NATURAL PHILOSOPHY, MILITARY SCIENCE, AND TACTICS.

CHARLES LELAND BALCH, B. A.,
PROFESSOR OF LATIN AND GREEK LANGUAGES AND LITERATURES.

EDOUARD CHAMIER,
PROFESSOR OF MODERN LANGUAGES AND LITERATURES, AND OF LINEAR, ARCHITECTURAL AND LANDSCAPE DRAWING.

THOMAS RUSSELL CROSBY, M. D.,
PROFESSOR OF ANATOMY, PHYSIOLOGY AND NATURAL HISTORY.

SAMUEL WALKER SHATTUCK, B. S.,
TUTOR IN MATHEMATICS AND MILITARY TACTICS.

SAMUEL WALKER SHATTUCK, B. S.,
LIBRARIAN.

ADJUTANTS.

T. H. KELLOGG - - - - - SPRING TERM, 1862.
C. E. STEELE - - - - - - SUMMER TERM, 1862.
C. E. RICH - - - - - FALL TERM, 1862.

ROSTER.

Names.	Residences.
Abbott, Edward Stanley,	*Beverly, Mass.*
Adams, Edward Dean,	*Boston, Mass.*
Adams, Henry Harrington,	*E. Cambridge, Mass.*
Allen, Charles Parsons,	*Irasburgh.*
Allen, Cornelius Lansing,	*Salem, N. Y.*
Allen, Ira Hayden, Jr.,	*Irasburgh.*
Alvord, Henry Elijah,	*Greenfield, Mass.*
Ashcroft, Charles Edward,	*Boston, Mass.*
Atwood, Charles Henry,	*St. Albans.*
Babbitt, Elbridge Harris,	*West Randolph.*
Bailey, George Alonzo,	*Woodstock.*
Bancroft, Arthur Daget,	*Montpelier.*
Bancroft, George Doane,	*Charlestown, Mass.*
Barrett, Curtis Sawyer,	*South Strafford.*
Bascom, Warren Franklin,	*Whitehall, N. Y.*
Bayard, Albert Fairfax,	*Brooklyn, N. Y.*
Birchard, Sardis,	*Fayetteville.*
Boyd, John Curry,	*Boston, Mass.*
Bush, Charles Edmund,	*Shoreham.*
Call, Norman,	*Newcastle, Me.*

Names.	Residences.
Carpenter, Lorenzo D.,	*Vershire.*
Chaffin, William Henry,	*Claremont, N. H.*
Chapin, Charles Jones,	*Brattleboro'.*
Chase, John,	*Langdon, N. H.*
Clapp, Stephen Rowe, Jr.,	*Boston, Mass.*
Clark, Charles S.,	*E. Brattleboro'.*
Colvocoresses, George Partridge,	*Norwich.*
Crandall, Edward Rix,	*Gaysville.*
Daniels, Willis Kimball,	*Plainfield, N. H.*
Dearborn, Walter Webster,	*Plymouth, N. H.*
Denison, Joseph Dudley,	*Royalton.*
Dewey, William Strong,	*Queechee.*
Dodge, William Aseph,	*Post-Mills.*
Duncklee, Horace,	*Brighton, Mass.*
Eaton, Benjamin Brially,	*Ogunquit, Me.*
Elliott, William Cowper,	*W. Brattleboro'.*
Estey, Julius Jacob,	*Brattleboro'.*
Folsom, George Albert,	*Sunrise City, Minn.*
Fuller, Byron,	*Lebanon, N. H.*
Gay, Frederic,	*Gaysville.*
Gerrish, William,	*Chelsea, Mass.*
Gibson, James, Jr.,	*Salem, N. Y.*
Gilbreth, Frederic William,	*Augusta, Me.*
Gilman, George Edwin,	*Centre Harbor, N. H.*
Goddard, Samuel Henry,	*Norwich.*
Goodwin, William Stone,	*Boston, Mass.*
Goulding, Joseph Hiram,	*Potsdam, N. Y.*
Gragg, Charles W.,	*Boston, Mass.*
Gray, John Smith,	*Walpole, Mass.*
Green, Samuel Harrison,	*Montgomery C.*
Gregory, Charles Dan,	*Waterford.*

Names.	Residences.
Hastings, Addison Tyler,	*Medway, Mass.*
Haven, William,	*Portsmouth, N. H.*
Hays, William Bratton, Jr.,	*Pittsburgh, Pa.*
Hazleton, Walter Scott,	*Strafford*
Hebard, William, Jr.,	*Chelsea.*
Henry, Horace Chapin,	*N. Bennington*
Hopkins, George Washington,	*Lowell, Mass*
Houghton, Edmund Charles,	*N. Bennington.*
Howard, Henry A.,	*Windsor.*
Howard, William Woodbury,	*Hallowell, Me.*
Hoyt, Charles Arthur,	*Deerfield, Mass.*
Kellogg, Theodore Harvey,	*Hillsborough, O.*
Kelton, Dwight H.,	*East Montpelier.*
Kent, Charles Nelson,	*Lancaster, N. H.*
Lasier, Thomas Jefferson,	*Freeport, Ill.*
Lawrence, Frank Gordon,	*Groton, Mass.*
Lee, Douglass,	*Lenox, Mass.*
Lincoln,* Gilbert A.,	*Bethel.*
Lord, Robert Chandler,	*Boston, Mass.*
McCulloch, Fred. Halsey,	*Ft. Wayne, Ia.*
Mead, William Rutherford,	*Brattleboro'.*
Metcalf, Ralph,	*Claremont, N. H.*
Metcalf, William Henry,	*Damariscotta, Me.*
Millington, Gilbert David,	*Shaftsbury.*
Moores, Fred. Walter, Jr.,	*Boston Navy Yard, Mass.*
Morey, Arthur,	*Strafford.*
Moses, Rufus Leander,	*Norwich.*
Nichols, Edward Payson,	*Newcastle, Me.*
Nichols, Henry B.,	*Norwich.*
Norris, Charles Frederick,	*Damariscotta, Me.*

* Deceased.

Names.	Residences.
Noyes, Edward Horatio,	*Springfield, Mass.*
Ober, George Hawes,	*Wardsboro'.*
Ordway, Leonard Sanborn,	*Freeport, Ill.*
Ormsby, Charles Brooks,	*Farmington, Me.*
Osgood, Charles Henry,	*Wentworth, N. H.*
Osgood, John Holbrook,	*Pomfret, Ct.*
Paige, Edwin Ruggles,	*Bennington.*
Papanti, Augustus Lorenzo,	*Boston, Mass.*
Parmenter, Daniel Webster,	*Framingham, Mass.*
Patterson, Rody, Jr.,	*Pittsburgh, Pa.*
Peck, John Howard,	*E. Montpelier.*
Phelps, Dudley Farley,	*Boston, Mass.*
Phillips, Henry Moses,	*Deerfield, Mass.*
Pond, Alexander Viets Griswold,	*Mendon, Mass.*
Potter, Joel Sanford,	*Whitehall, N. Y.*
Putnam, George Frederick,	*Croydon, N. H.*
Rand, Frederick Henry,	*Boston, Mass.*
Rice, Thomas Greenleaf,	*Winslow, Me.*
Rich, Clayton Eugene,	*Shoreham.*
Rich, Irving Bascom,	*Shoreham.*
Richards, Joseph Swift,	*Brooklyn, N. Y.*
Roberts, Edward Eben,	*Hartford, Ct.*
Roberts, Benjamin Kearney,	*Washington, D. C.*
Robertson, John,	*Charlestown, N. H.*
Ross, Charles H.,	*Brandon.*
Sabine, John,	*Hartland.*
Sawyer, Francis Asbury,	*Dover, N. H.*
Shattuck, Abbott Allen,	*Groton, Mass.*
Slayton, Henry L.,	*Lebanon, N. H.*
Sleeper, Charles,	*St. Albans, Me.*

Names.	Residences.
Smith, Charles W.,	*Washington.*
Smith, George W.,	*Lebanon, N. H.*
Smith, Jesse Bishop,	*Strafford.*
Steele, Charles Edward,	*Windsor.*
Stevenson, Holland Newton,	*Cambridge, N. Y.*
Stoddard, Edward Lothrop,	*Boston, Mass.*
Sumner, James Breckenridge,	*Dalton, N. H.*
Sweetser, James Vermilyea,	*Marion, Ia.*
Tanner, Robert,	*Pittsburgh, Pa.*
Thorndike, Charles Francis,	*Beverly, Mass.*
Thorndike, Thomas Stephens,	*Beverly, Mass.*
Tillinghast, Charles Foster, Jr.,	*Pittsburgh, Pa.*
Tolles, Clarence Weston,	*Claremont, N. H.*
Townsend, William Henry,	*Windsor.*
Vernam, William Spencer,	*Albany, N. Y.*
Walcott, Ellis Pitcher,	*Utica, N. Y.*
Walcott, Franklin Hamilton,	*N. Y. Mills, N. Y.*
Wellman, Samuel Thomas,	*Nashua, N. H.*
Wells, John Chester,	*Brattleboro'.*
Wentworth, Charles Eben,	*Portsmouth, N. H.*
Wilder, Rufus Lawrence,	*Leominster, Mass.*
Willmarth, Albert Waterman,	*Stamford.*
White, Arthur Watson,	*Columbus, O.*
Whitmore, Adin Hamlin,	*Springfield.*
Whitney, Frank,	*Boston, Mass.*
Wood, Charles Henry,	*Fitchburg, Mass.*
Woodman, Edward,	*Dover, N. H.*
Wyman, Silas Wait,	*Augusta, Me.*
TOTAL NUMBER,	141.

DRILL SERGEANTS

FOR THE FALL TERM OF 1862.

Adams, Edward Dean,
Allen, Charles Parsons,
Bascom, Warren Franklin,
Dodge, William Aseph,
Estey, Julius Jacob,
Lasier, Thomas Jefferson,
Norris, Charles Frederick,
Osgood, Charles Henry,
Thorndike, Charles Francis.

OFFICERS OF PASSAGES.

SPRING TERM 1862.

No. 1. Sawyer, Francis Asbury,
2. Tillinghast, Charles Foster, Jr.
3. Rich, Clayton Eugene,
4. Nichols, Edward Payson.

SUMMER TERM 1862.

No. 1. Bascom, Warren Franklin.
2. Barrett, Curtis Sawyer.
3. Rich, Clayton Eugene,
4, Fuller, Byron.

FALL TERM 1862.

No. 1. Richards, Joseph Swift,
2. Folsom, George Albert,
3. Allen, Charles Parsons,
4. Osgood, Charles Henry.

GRADUATING CLASS, 1862.

Stoughton, Charles R. *Bellows Falls.*
Kellogg, Theodore Harvey, *Hillsborough, O.*

At Commencement, August 1862, the honorary Degree of D. D.

COURSE OF STUDY.

There are three Courses of Stu ly pursued by Undergraduate Members of the University ;—

1. The Regular Academic Curriculum ;
2. A Curriculum of the Sciences ;
3. A Partial Course which may include parts of each Curriculum.

Four years are required to complete the Academic Course, at the end of which the student receives the degree of Bachelor of Arts. Three years are required to complete the Scientific Course, at the end of which the student receives the degree of Bachelor of Sciences.

Certificates will be given to those who have pursued a partial Course, stating the subjects studied and the proficiency attained.

Instruction in Military Science, in all its details, is given to students in every Department.

Norwich University is the only regularly chartered Institution in the Northern States, which combines full Classical, Scientific, and Military Curricula. Its graduates have been eagerly sought after, during the present war, as field and regimental Officers, and many of the Vermont Regiments, whose discipline and valor have shone so conspicuously in camp and field, have been officered and drilled by undergraduate as well as by graduated Cadets of this Institution.

The studies are so arranged that the students in the two Departments recite together in all the subjects which are common to both. Students in both Departments are regarded and treated in all respects as equals in their respective Classes. The Classical have no privileges which are not fully enjoyed by the Scientific.

Students may enter the Class for which they are fitted, at any time, especially at the middle of the Spring Term, when a class commences in Algebra and Geometry.

Those who are sufficiently prepared to join advanced classses are always allowed to do so, after a satisfactory examination in the studies already completed by that Class.

The department of Modern Languages is under the direction of an accomplished instructor. The drill in these languages is thorough, and such as to enable the student, with proper application, on his part, to

SCIENTIFIC DEPARTMENT.

Norwich University was the first Institution in this country to introduce a complete Scientific Course in its instruction.

In addition to the studies of a regular Scientific Course, instruction is given in Linear and Architectural Drawing, Fortification, Landscape Drawing, and Sketching from Nature. Surveying and Engineering are taught practically.

MILITARY SCIENCE.

The feature, however, which, more than any other, distinguishes Norwich University from other Collegiate institutions, is the department of Military Science and Tactics.

Agreeably to the provisions of its charter, the students are under Military Discipline—are called Cadets—dress in uniform, and are instructed in Infantry, Rifle and Artillery Drill, Bayonet Exercise, Fortification, Reconnoissance, Castrametation, and in Guard and Out-Post duty. All the arms and equipments necessary for drills are furnished by the State of Vermont.

The military feature of this institution is one which should particularly commend it to the notice, and patronage of the public at this time. The want of men skilled in Military Science and Tactics, to take command of volunteer forces, and discipline them into effective soldiers, has been severely felt in organizing the present army of the United States. The reverses with which it has met are, without douht, owing largely to this cause. To guard against this defect iu the future, it is now generally felt, that young men should be educated thoroughly in every department of Military Science. In times of peace this knowledge would not incapacitate men for, nor interfere with any other business;—while in times of war, it is invaluable to the country in training an army for efficient service.

Peaceful citizens can thus be taken from their ordinary pursuits, and with little delay, made efficient soldiers and able to endure the hardships of a campaign.

The value of officers educated at West Point is well known. West Point, however, can educate but a limited number, a mere fraction of those, who wish and ought to receive a military education. The many must therefore seek it in other institutions. It is believed that this College, is the only one in the North where it can now be obtained.

But military discipline is desirable in other respects than those already named. It strengthens the body, gives to youth a vigorous constitution, and a manly bearing, and fits them to serve their country according to the spirit of the Constitution of the United States, not alone on the field of battle, but everywhere, in all employments and departments of life, which

demand strength, energy and endurance. Its regular and systematic training of the body, is highly conducive to perfect physical development, and the preservation of health. Many instances can be shown in which broken health and debilitated constitutions have been restored, and invigorated, health and strength acquired, when physicians and friends had begun to despair, and all this advantage is attained by means agreeable in themselves, and far less costly than doctors' bills.

Thoughtful men have long since seen the necessity for training the body as well as the mind. They have long since known that however strong the mind, it can do little without strength of body. The public have at length begun to perceive and acknowledge this truth. Gymnasia are now considered almost as needful in Institutions of learning as Philosophical apparatus. This is well; every village Academy should have its gymnasium; but the gymnasium does not fully accomplish the desired object. It does not educate the bodies of all. The strong, vigorous, healthy youth will use the gymnasium, but those who need it most will shun it. The delicate, dyspeptic, moping, over-studious youth must be compelled to take exercise; for him the drill—the regular drill under an officer—made compulsory—the drill is the only means as yet discovered for him.

DISCIPLINE.

The discipline, though strict, is not oppressive, students of all departments and classes being treated with the most scrupulous impartiality. The object is to promote study, preserve order, and improve the morals.

The immediate supervision of the discipline and all matters pertaining to order are under an *Officer of the Barracks* whose rooms are in the Quarters. Under him is a cadet, chosen for his experience and efficiency, called the *Adjutant*, who assists him in his duties. Besides these, the Cadets themselves act in rotation as *Officer of the day*. The duty of the *Officer of the day* is, to attend at all roll calls, mark absences and improprieties, inspect rooms and report anything that he may see amiss during his term of office. As all hold this office in their turn, there is nothing in it to make it odious or irksome.

The students room in the University building, so long as the accommodations there are sufficient, two generally occupying each room. They furnish their own rooms,—this is often done, however, by purchasing, at reduced prices, furniture from those who have no longer use for it.

The Academic year is divided into three Terms. Charges for the year are accordingly divided into three payments.

ADMISSION.

Candidates for admission must be at least fourteen years old, and able to sustain a satisfactory examination in Arithmetic, Algebra through Simple Equations, English, Latin and Greek Grammar, Latin Reader, Sallust, Cicero's Select Orations, First Six Books of Virgil, Four Books of Xenophon's Anabasis, and Homer's Iliad, two Books, or its equivalent.

Candidates for admission into the Scientific Department are required to sustain a satisfactory examination in English Grammar, Geography, Arithmetic, and Algebra to Equations of the First Degree.

GOVERNMENT.

The Executive Government is vested in the Faculty.

DISCIPLINE.—The discipline is military in principle and form—*actual merit* is the only criterion of scholarship and character.

TEXT BOOKS.

GREEK.—Xenophon's Anabasis; Herodotus; Homer's Iliad; Greek Tragedies; Demosthenes De Coronâ; Xenophon's Memorabilia; Longinus; Plato's Defence of Socrates; Liddell and Scott's Greek Lexicon; Crosby's Greek Grammar.

LATIN.—Lincoln's Livy; Horace; Captivi of Plautus; Tacitus; Terence; Cicero De Oratore, and Tusculan Questions; Cicero's Brutus; Leverett's Lexicon; Andrews & Stoddard's Grammar.

MATHEMATICS.—Algebra, Davies' Bourdon; Geometry, Davies' Legendre; Trigonometry, Davies' Legendre; Surveying, Davies'; Navigation; Analytical Geometry, Descriptive Geometry, Dif. and Int. Calculus; Shades and Shadows from Davies' Course; Mahan's Civil Engineering; Bartlett's Analytical Mechanics, Acoustics and Optics, and Astronomy.

NATURAL SCIENCES.—Lyell's Geology; Silliman's Chemistry; Dana's Mineralogy.

HISTORY.—Smith's Greece and Liddell's Rome; Hume's England.

RHETORIC.—Whately's Rhetoric; Themes and Declamations; Campbell's Rhetoric; Fowler's English Grammar, University Edition.

PHILOSOPHY.—Whately's Logic; Cousin's Psychology; Mahan's Intellectual Philosophy; Stewart's Philosophy of the Mind; Say's Political Economy; Kames' Elements; Paley's Evidences; Hickok's Moral Science.

GENERAL REGULATIONS.

The students of the University, in their military capacity, are styled CADETS.

Times for the commencement and continuation of study hours, for roll-calls, and meals, are regulated by the Faculty.

Hours for practical scientific operations, for the military exercises, and for field and other duties, are, from time to time, designated by the Faculty.

PROHIBITIONS AND DUTIES.

1. Every Cadet is prohibited going out of the limits of the village at any time, unless with permission, or on duty.

2. Gambling, or games of chance of any description, with or without cards; scuffling, and unnecessary noise, are prohibited. Every species of irregularity and immorality; in short, every thing contrary to the true principles of gentlemanlike conduct and military discipline is forbidden, and will be severely punished.

3. Loitering about taverns, or stores, or any other places of public resort is strictly prohibited.

4. Habits of industry and economy are urgently recommended and enforced.

5. Every Cadet is prohibited introducing or bringing spirituous liquors of any kind into the quarters, or keeping or allowing any to be kept in his room, on pain of expulsion.

6. Every Cadet is required to attend to his duties both as to time and place, with the greatest promptitude and decision; and when on duty of any kind, the strictest attention to the correct, efficient and energetic discharge of such duty is required.

7. Neatness and propriety of dress are required, and the arms and accoutrements must be kept in perfect order.

8. Each Cadet is required to make good all damages done to his arms and accoutrements, instruments and quarters, or their appurtenances.

9. The utmost neatness, both within, and in the vicinity of the quarters is required.

10. Discharging fire-arms, except in the regu ar routine of duty, or disturbing the peace in any manner whatever, is strictly prohibited.

11. Strict obedience to his superior officers is at all times required of every Cadet.

12. No Cadet is permitted to instruct while in the University, except under the direction of the Faculty.

13. Smoking tobacco is considered unbecoming a Cadet. The public practice of it is strictly prohibited.

MILITARY DUTIES AND INSTRUCTION.

1. Every Cadet is required to appear at all dress parades, as well as on guard, in complete uniform, with his clothes, arms and equipments in perfect order.

2. The Cadets, in rotation, discharge the duties of officers, non-commissioned officers, officers of the guard, officers of the day, and commandants of parade.

3. Whenever a Cadet is acting in any official capacity, he is required to discharge all his duties agreeably to the principles and practice of strict military discipline, and with the gentlemanly independence becoming a soldier.

4. Whenever a Cadet is in the exercise of any command, he must be treated with the most perfect respect, and implicit obedience yielded to his orders by all concerned.

5. In the military instruction, the same system of tactics is adopted as in the Army of the United States.

DRESS.

Every Cadet is required to provide himself with the uniform dress of the University, and at all times to be neatly and appropriately dressed. After the term in which he enters, every Cadet is required to wear the uniform of the University during term time, whenever he goes beyond the limits of the Quarters, unless special permission to the contrary is given.

PUBLIC WORSHIP.

Every Cadet is required to attend Church on the Sabbath.

VACATIONS AND FURLOUGHS.

1. Every Cadet is required to report himself immediately on his return, after the expiration of the vacation or of his furlough, and is from that time considered to be on duty. Absence, without sufficient excuse, beyond that time will incur demerit marks.

2. As frequent absences are very injurious to the progress of students, by interrupting their studies, and the regular order of their duties, no furlough will be given to any Cadet in term time, except in cases of sickness or other urgent necessity.

Parents and guardians are requested particularly to have regard to this regulation. Nothing is more injurious to the progress of the student than frequent absences during term time.

EXPENSES.

TUITION, per term, in University, for regular studies,	$14.50
ROOM-RENT, per term,	3 50
LIGHTS AND FUEL, per week, about	.30
BOARD, in private families, per week,	2.00 to 2.50
MODERN LANGUAGES, per term, *each extra*,	5.00
DRAWING, per term, *extra*,	4.00

Other incidental expenses, as for books, furniture, travelling expenses, in societies, &c., vary according to circumstances, and the habits of the Cadets.

REMARKS.

1. All certificates given at the time of dismission, will be made out strictly according to truth and the *real standing* of the student.

2. Bills for tuition and room-rent payable in advance.

3. Parents and guardians are requested not to furnish their sons and wards with more money than may be necessary for the discharge of their regular bills. Nothing tends more to demoralize students and make them idle than too large an allowance of pocket-money.

4. No deduction made in charges when a student leaves, except in cases of sickness.

COLLEGIATE COURSE OF STUDY.

YEAR I.

FALL,	SPRING.	SUMMER.
ra, Roman History, Virgil, Lat. in Grammar. English Philology. Historical Lectures.	Algebra finished, Geometry commenced, History of Greece, Xenophon's Anabasis, Arnold's Latin's Prose Composition, English Philology.	Geometry finished, English History, Horace's Odes Prosody Herodotus commenced, Arnold's Latin Prose Composition, English Philology.
istry, Campbell's Rhetoric, Heus, Horace's Satires. Cicero's, s, Homer, Arnold's Greek Prose Composition.	Trigonometry, Mensuration, Des. Geometry, Geology, Livy, Arnold's Gr. Prose Composition.	Surveying, Navigation. Shades and Shadows, Homer. Mineralogy.
tical Geometry, Logic, Plautus' vi, Terence, Roman Antiquities. schylus' Septem contra Thebas.	Differential and Integral Calculus, Physiology, Natural History, Euripides, Cicero De Oratore, Gracian Antiquities.	Analytical Mechanics commenced, Laws of Nations, Juvenal and Persius.
tical Mechanics completed, Con- on of United States, Political omy commenced, Cousin's Phy- gy, Demosthenes and Longinus.	Acoustics and Optics. Mahan's Intellectual Philosophy. Stewart's Philosophy of the Mind. Political Economy completed, Kame's Elements. Tacitus, Cicero's Tusculan Questions.	Astronomy, Civil Engineering and Field Practice. Kames' Elements, Whately's Rhetoric.

Note—Recitations every Monday morning in Paley' Natural Theology. Moral Science, or other books of a religious or moral character.
Themes and Declamations weekly, throughout the Course.
Modern Languages, and Drawing in all its departments, taught as extras.

SCIENTIFIC COURSE OF STUDY.

YEAR I.		YEAR II.	YEAR III.
FALL.	SPRING.	SUMMER.	
...ra, Geometry, Roman History. ...sh Philology, Historical Lectures.	Algebra, Geometry, Trigonometry, Mensuration, Descriptive Geometry, History of Greece, English Philology, Historical Lectures.	Algebra, Geometry, Surveying, Navigation, Shades and Shadows, English History, English Philology, Historical Lectures.	
...ytical Geometry, Campbell's Rhetoric, Chemistry; Experiments and ...ures; English Philology.	Differential and Integral Calculus, Geology, Locke's Cond. of Human Understanding, Selections from Locke on the Human Understanding.	Analytical Mechanics commenced, Mineralogy, Laws of Nations. English Philology.	
...ytical Mechanics completed. Lectures on United States Political Economy commenced. Cousin's Psychology.	Astronomy completed. Political Economy completed. Mahan's Intellectual Philosophy. Stewart's Philosophy of the Mind. Kames' Elements.	Astronomy, Civil Engineering and Field Practice, Kames' Elements, Whately's Rhetoric.	

NOTE—Recitations every Monday morning in Paley's Natural Theology, Moral Science, or other books of a religious or moral character.
Themes and Declamations weekly, throughout the Course.
Modern Languages, and Drawing in all its departments, taught as extras.

CALENDAR.

1862.

Sept. 11. First Term begins—Thursday evening.

Dec. 18. First Term ends—Thursday morning.

WINTER VACATION, FOUR WEEKS.

1863.

Jan. 15. Second Term begins—Thursday evening.

Apr. 23. Second Term ends—Thursday morning.

SPRING VACATION, TWO WEEKS.

May 7. Third Term begins—Thursday evening.

Aug. 13. Commencement—Thursday.

SUMMER VACATION, FIVE WEEKS.

Sept. 17. First Term begins—Thursday evening.

Dec. 24. First Term ends—Thursday morning.

CATALOGUE

OF THE

CORPORATION, OFFICERS, AND CADET

OF

NORWICH UNIVERSITY

FOR THE ACADEMICAL YEAR

1863-4.

NORWICH, VT.
PRINTED FOR THE UNIVERSITY.
November, 1863.

CORPORATION.

TRUSTEES.

Rev. EDWARD BOURNS, LL. D., EX OFFICIO,		PRESIDENT.
Rev. JOSIAH SWETT,	*Bethel.*	SECRETARY.
F. L. OLDS,		TREASURER.

Gen. JAMES T. PRATT,	*Rocky Hill, Ct.*
Hon. REUBEN DAVIS,	*Cornish, N. H*
Col. SAMUEL NUTT,	*Hartford.*
HORACE WEBSTER, Esq., LL. D.,	*New York City.*
Gen. WILLIAM E. LEWIS	*Norwich.*
JULIUS Y. DEWEY, Esq., M. D.,	*Montpelier*
Hon. Col. STEPHEN THOMAS,	*West Fairlee.*
Hon. EDMUND WESTON,	*Randolph*
Hon. TIMOTHY P. REDFIELD,	*Montpelier.*
Rev. JOSIAH SWETT, A. M.,	*Bethel.*
Rev. GEORGE M. RANDALL, D. D.,	*Boston, Mass.*
Hon. DUDLEY C. DENISON,	*Royalton.*
Hon. WILLIAM HEBARD,	*Chelsea.*
GEORGE R. CHAPMAN, Esq.,	*Woodstock.*
R. RICHARDSON, Esq.,	*Montpelier.*
H. BLOOD, Esq.,	*Norwich.*
CURTIS BACON, Esq.,	*Middletown, Ct*
Rev. MALCOLM DOUGLASS,	*Windsor.*
Hon. A. P. HUNTON,	*Bethel.*
Col. HENRY O. KENT,	*Lancaster, N. H.*
JOHN L. FARWELL, Esq.,	*Claremont, N. H.*
Rev. ROGER S. HOWARD,	*Rutland.*

FACULTY.

REV. EDWARD BOURNS, LL. D. PRESIDENT,
AND PROFESSOR OF INTELLECTUAL, MORAL AND POLITICAL PHILOSOPHY

ALONZO JACKMAN, LL. D.,
GENERAL V. V. M.,
PROFESSOR OF MATHEMATICS, NATURAL PHILOSOPHY, MILITARY SCIENCE, AND TACTICS.

CHARLES LELAND BALCH, M. A.,
PROFESSOR OF THE LATIN AND GREEK LANGUAGES AND LITERATURES.

EDOUARD CHAMIER,
PROFESSOR OF MODERN LANGUAGES AND LITERATURES, AND OF LINEAR, ARCHITECTURAL AND LANDSCAPE DRAWING.

THOMAS RUSSELL CROSBY, M. D.,
PROFESSOR OF ANATOMY, PHYSIOLOGY, AND NATURAL HISTORY.

ALBERT H. GALLATIN, M. A., M. D.,
PROFESSOR OF CHEMISTRY, GEOLOGY, AND MINERALOGY.

_____, _____,
TUTOR IN MATHEMATICS AND MILITARY TACTICS.

EDOUARD CHAMIER,
LIBRARIAN.

ADJUTANTS.

CURTIS SAWYER BARRETT,	SPRING TERM,	1863.
RUFUS LEANDER MOSES.	SUMMER TERM,	1863.
ABBOTT ALLEN SHATTUCK,	FALL TERM,	1863.

CHARLES FRANCIS THORNDIKE,

GRADUATES OF 1863.

Names.	Residences.
Alvord, Henry Elijah, B. S.,	*Greenfield, Mass.*
Atwood, Charles Henry, B. S.,	*St. Albans.*
Bailey, George Alonzo, B. S.,	*Woodstock.*
Barrett, Curtis Sawyer, B. S.,	*South Strafford.*
Dewey, William Strong, B. S.,	*Quechee.*
Haven, William, B. S.,	*Portsmouth, N. H.*
Moses, Rufus Leander, B. S.,	*Norwich.*
Ober, George Hawes,* B. S.,	*Fayetteville.*
Patterson, Rody, Jr., B. S.,	*Pittsburgh, Pa.*
Rich, Clayton Eugene, B. S.,	*Shoreham.*
Steele, Charles Edward, B. S.,	*Windsor.*

GRADUATES, 11.

* Deceased.

Kent, Charles Nelson,	*Lancaster, N. H.*
Lasier, Thomas Jefferson,	*Freeport, Ill.*
Lord, Robert Chandler,	*Boston, Mass.*
McCulloch, Fred. Halsey,	*Ft. Wayne, Ia.*
Metcalf, Ralph,	*Claremont, N. H.*
Morey, Arthur Paine,	*Strafford.*
Osgood, John Holbrook,	*Pomfret, Ct.*
Phelps, Dudley Farley,	*Boston, Mass.*
Sawyer, Francis Asbury,	*Dover, N. H.*
Shattuck, Abbott Allen,	*Groton, Mass.*
Thorndike, Charles Francis,	*Beverly, Mass.*
Tillinghast, Charles Foster, Jr.,	*Pittsburgh, Pa.*

SENIORS, 16.

JUNIORS.

Names.	Residences.
Bancroft, George Doane,	*Charlestown, Mass.*
Bottomly, Frank Timothy,	*Cherry Valley, Mass.*
Boyd, John Curry,	*Boston, Mass.*
Chapin, Charles Jones,	*Brattleboro'.*
Chase, John,	*Langdon, N. H.*
Daniels, Willis Kimball,	*Plainfield, N. H.*
Dewey, John Jasper,	*Quechee.*
Dodge, William Aseph,	*Post-Mills.*
Estey, Julius Jacob,	*Brattleboro'.*
Folsom, George Albert,	*Sunrise City, Minn.*
Glidden, John Mills,	*Junior Furnace, Ohio.*
Goulding, Joseph Hiram,	*Potsdam, N. Y.*
Green, Samuel Harrison,	*Montgomery.*
Howard, Henry Augustus,	*Windsor.*
Howard, William Woodbury,	*Hallowell, Me.*
Hill, Augustus Villeroy,	*Salem, N. Y.*
Johnson, William Henry,	*Bradford.*
Ladd, William Fowle,	*Portsmouth, N. H.*
Millington, Gilbert David,	*South Shaftsbury.*
Ormsby, Charles Brooks,	*Farmington, Me.*
Price, Anzelm,	*New York City.*
Rich, Irving Bascom,	*Shoreham.*
Richards, Joseph Swift,	*Brooklyn, N. Y.*
Robertson, John,	*Charlestown, N. H.*
Smart, Charles Henry,	*Lowell, Mass.*
Smith, Jesse Bishop,	*Strafford.*
Stebbins, Marshall Burton,	*Bradford.*

Names.	Residences.
Stevenson, Holland Newton,	*Cambridge, N. Y.*
Stoddard, Edward Lothrop,	*Boston, Mass.*
Stoddard, Samuel Fellows,	*Farmington, Me.*
Sweetser, James Vermilyea,	*Marion, Ia.*
Thorndike, Thomas Stephens,	*Beverly, Mass.*
Tolles, Clarence Weston,	*Claremont, N. H.*
Wentworth, Charles Eben,	*Portsmouth, N. H.*

JUNIORS, 34.

SOPHOMORES.

Names.	Residences.
Allen, Cornelius Lansing,	*Salem, N. Y.*
Denison, Joseph Dudley,	*Royalton.*
Potter, Joel Sanford,	*Whitehall, N. Y.*
Wilder, Rufus Lawrence,	*Leominster, Mass.*

SOPHOMORES, 4.

FRESHMEN.

Names.	Residences.
Adams, Henry Harrington,	*E. Cambridge, Mass.*
Allen, Ira Hayden, Jr.,*	*Irasburgh.*
Bachelder, Fred. Ernest,	*Portland, Me.*
Batchelder, James Edwin,	*Manchester.*
Baxter, Henry Clay,	*Derby Line.*
Blackinton, William Sumner,	*Attleboro', Mass.*
Bird, Charles Sigourney,	*Boston, Mass.*
Burnham, Henry Clay,	*South Strafford.*
Burkham, Edward G., Jr.,	*Cincinnati, Ohio.*
Brown, Lucius Boardman,	*Stark, Me.*
Childs, George William,	*Groton, Mass.*
Clark, Charles Stephen,	*East Brattleboro'.*
Clark, Henry Charles,	*Roxbury, N. H.*
Coffin, Herbert Greenleaf,	*Boston, Mass.*
Colvocoresses, George Partridge,	*Norwich.*
Crandall, Edward Rix,	*Gaysville.*
Cutts, Charles Jarvis,*	*Brattleboro'.*
Davidson, Harland Page,	*Colebrook, N. H.*
Dearborn, Walter Webster	*Plymouth, N. H.*
Eaton, Benjamin Brially,	*Ogunquit, Me.*
Eddey, Horace Walker,	*Springfield, Mass.*
Elliott, William Cowper,	*W. Brattleboro'.*
Fiske, William,	*Roxbury, Mass.*
Gay, Frederic,	*Gaysville.*
Gibson, James, Jr.,	*Salem, N. Y.*
Gilman, George Edwin,	*Centre Harbor, N. H.*

Names.	Residences.
Gilman, Brodie Benjamin,	*Salem, N. Y.*
Gowdy, Francis Marion,	*Broad Brook, Ct.*
Gray, John, Jr.,	*Barnstable, Mass.*
Grow, Julius Timothy,	*Guildhall.*
Head, Henry Hopkins,	*Montgomery.*
Hodges, Edward Lambert,	*Cherry Valley, Mass.*
Howard, Abijah, Jr.,	*Thetford.*
Johnson, Alexander Bryan,	*Washington, D. C.*
Lawrence, Frank Gordon,	*Groton, Mass.*
Lefavor, Wilton Fields,	*Columbus, Ohio.*
Leonard, Henry Barton,	*Roxbury, Mass.*
Lindsay, Winslow Metcalf,	*Laconia, N. H.*
Lowe, Abner Barnard,	*Enfield, N. H.*
McLoud, John Henry,	*Calais.*
Needham, William Chauncy H.,	*Quechee.*
Otis, George Edmund,	*Boston, Mass.*
Paige, Edwin Ruggles,	*Bennington.*
Papanti, Augustus Lorenzo,	*Boston, Mass.*
Pond, Alexander Viets Griswold,	*Mendon, Mass.*
Potter, Charles Henry,	*Greenfield, Mass.*
Reed, Charles Montgomery,	*W. Bridgewater, Mass.*
Rice, Thomas Greenleaf,	*Winslow, Me.*
Roberts, Benjamin Kearney,	*Washington, D. C.*
Smith, Charles Walter,	*Washington.*
Stanwood, Charles Farnham,	*Boston, Mass.*
Smith, William Steele,	*Brooklyn, N. Y.*
Thorp, William Wakeman, Jr.,	*St. Albans.*
Townsend, William Henry,	*Windsor.*
Welch, Francis,	*Roxbury, Mass.*

* Deceased.

Names.	Residences.
Wellman, Samuel Thomas,	*Nashua, N. H.*
Wells, John Chester,	*Brattleboro'.*
Wheelwright, Charles Storey,	*Roxbury, Mass.*
White, Arthur Watson,	*Columbus, Ohio.*
Witmer, Ira David,*	*Paradise, Pa.*
Whittier, James Anson L.,	*Gorham, Me.*
Wyman, Silas Wait,	*Augusta, Me.*

FRESHMEN, 62.

* Deceased.

PARTIAL COURSE MEN.

Names.	Residences.
Aldrich, Edward Kent,	*New York City.*
Allen, Charles Parsons,	*Irasburgh.*
Bacon, George Gwathmey,	*Louisville, Ky.*
Bayard, Albert Fairfax,	*Brooklyn, N. Y.*
Birchard, Sardis,	*Fayetteville.*
Carpenter, Lorenzo Daniel,	*Vershire.*
Child, Oscar Barron,	*West Randolph.*
Davis, George Alfred,	*Danville.*
Duncklee, Horace,	*Brighton, Mass.*
Goodwin, William Stone,	*Boston, Mass.*
Gray, John Smith,	*Walpole, Mass.*
Hazelton, Walter Scott,	*Strafford.*
Houghton, Edmund Charles,	*N. Bennington.*
Kelton, Dwight Henry,	*E. Montpelier.*
Mead, William Rutherford,	*Brattleboro'.*
Norris, Charles Frederick,	*Damariscotta, Me.*
Noyes, Edward Horatio,	*Springfield, Mass.*
Partridge, Lewis Baxter,	*Norwich.*
Peck, John Howard,	*E. Montpelier.*
Putnam, George Frederick,	*Croydon, N. H.*
Rand, Frederick Henry,	*Boston, Mass.*
Stiles, Eli Gowdy,	*Broad Brook, Ct.*
Tibbetts, Charles Frederick,	*Augusta, Me.*
Ware, John Murray,	*Westmoreland, N. H.*
Willmarth, Albert Waterman,	*Stamford.*
Wood, Charles Henry,	*Fitchburgh, Mass.*

PARTIAL COURSE MEN, 26.

SUMMARY.

Seniors, - - - - -	16
Juniors, - - - - -	34
Sophomores, (Classical Course,) -	4
Freshmen, - - - - -	62
Partial Course Men, - - -	26
Total,* - - - - -	142

SUMMARY BY STATES.

Vermont, -	46	Ohio,	3
Massachusetts,	39	District of Columbia,	2
New Hampshire,	18	Indiana,	2
New York,	13	Illinois,	1
Maine, - -	11	Minnesota,	1
Pennsylvania,	2	Kentucky,	1
Connecticut,	3		142

* In every Catalogue there are included the names of all persons, who have been members of the University, since the issue of the previous Annual Catalogue.

DRILL SERGEANTS.

SUMMER TERM, 1863.

Adams Edward Dean,
Goulding, Joseph Hiram,
McCulloch, Fred. Halsey,
Metcalf, Ralph,
Sawyer, Francis Asbury,
Shattuck, Abbott Allen.

FALL TERM, 1863.

Shattuck, Abbott Allen, SUPERINTENDENT.

Boyd, John Curry,
Denison, Joseph Dudley,
Gerrish William,
Gregory, Charles Dan,
Lord, Robert Chandler,
Morey, Arthur Paine,
Smart, Charles Henry,
Tolles, Clarence Weston.

OFFICERS OF PASSAGES.

SPRING TERM, 1863.

No. 1. Rand, Frederick Henry,
2. Dewey, William Strong,
3. Dodge, William Aseph,
4. Willmarth, Albert Waterman,

SUMMER TERM, 1863.

No. 1. Howard, Henry Augustus,
2. Thorndike, Charles Francis,
3. Morey, Arthur Paine,
4. McCulloch, Fred. Halsey.

FALL TERM, 1863.

No. 1. Smith, Jesse Bishop,
2. Phelps, Dudley Farley,
3. Gerrish, William.
4. Osgood, John Holbrook.

COURSES OF STUDY.

There are three Courses of Study pursued by Undergraduate Members of the University;—

1. The Regular Academic Curriculum;
2. A Curriculum of the Sciences;
3. A Partial Course which may include parts of each Curriculum.

Four years are required to complete the Academic Course, at the end of which the student receives the degree of Bachelor of Arts. Three years are required to complete the Scientific Course, at the end of which the student receives the degree of Bachelor of Sciences. The Partial Course may be pursued for one term or for more terms.

Certificates will be given to those who have pursued a partial Course, stating the subjects studied and the proficiency attained.

Instruction in Military Science, in all its details, is given to students in every Department.

Norwich University is the only regularly chartered Institution in the Northern States, which combines full Classical, Scientific, and Military Curricula. Its graduates have been eagerly sought after, during the present war, as field and regimental Officers, and many of the Vermont Regiments, whose discipline and valor have shone so conspicuously in camp and field, have been officered and drilled by undergraduate as well as by graduated Cadets of this Institution.

CLASSICAL COURSE.

The studies are so arranged that the students in the Classical and oth- Departments recite together in all the subjects which are common to both. Students in all Departments are regarded and treated in all respects as equals in their respective Classes. The Classical have no privileges which are not fully enjoyed by the Scientific.

Students may enter the Class for which they are fitted, at any time, but especially at the beginning of each term, and in the middle of the Spring Term, (which falls this Academic year on March 10, 1864.) At this latter time a Class commences in Algebra and Geometry.

Those who are sufficiently prepared to join advanced classes are always allowed to do so, after a satisfactory examination in the studies already completed by that Class.

The department of Modern Languages is under the direction of an accomplished instructor. The drill in these languages is thorough, and

SCIENTIFIC DEPARTMENT.

Norwich University was the first Institution in this country to introduce a complete Scientific Course in its instruction.

In addition to the studies of a regular Scientific Course, instruction is given in Linear and Architectural Drawing, Fortification, Landscape Drawing, and Sketching from Nature. Surveying and Engineering are taught practically.

MILITARY SCIENCE.

At Norwich University the Latin and Greek Classics are pursued to the same extent and with the same thoroughness as at other American Colleges of the highest standing.

The feature, however, which, more than any other, distinguishes Norwich University from other Collegiate institutions, is the department of Military Science and Tactics.

Agreeably to the provisions of its charter, the students are under Military Discipline—are called Cadets—dress in uniform, and are instructed in Infantry, Rifle and Artillery Drill, Bayonet Exercise, Fortification, Reconnoissance, Castrametation, and in Guard and Out-Post duty. All the arms and equipments necessary for drills are furnished by the State of Vermont.

The military feature of this institution is one which should particularly commend it to the notice, and patronage of the public at this time. The want of men skilled in Military Science and Tactics, to take command of volunteer forces, and discipline them into effective soldiers, has been severely felt in organizing the present army of the United States. The reverses which it has met with are, without doubt, owing largely to this cause. To guard against this defect in the future, it is now generally felt, that young men should be educated thoroughly in every department of Military Science. In times of peace this knowledge would not incapacitate men for, nor interfere with any other business;—while in times of war, it is invaluable to the country in training an army for efficient service.

Peaceful citizens can thus be taken from their ordinary pursuits, and with little delay, made efficient soldiers and able to endure the hardships of a campaign.

The value of officers educated at West Point is well known. West Point, however, can educate but a limited number, a mere fraction of those, who wish and ought to receive a military education. The many must therefore seek it in other institutions. It is believed that this College, is the only one in the North where it can now be obtained.

But military discipline is desirable in other respects than those already named. It strengthens the body, gives to youth a vigorous constitution, and a manly bearing, and fits them to serve their country according to the

battle, but everywhere, in all employments and departments of life, which demand strength, energy and endurance. Its regular and systematic training of the body, is highly conducive to perfect physical development, and the preservation of health. Many instances can be shown in which broken health and debilitated constitutions have been restored, and invigorated, health and strength acquired, when physicians and friends had begun to despair, and all this advantage is attained by means agreeable in themselves, and far less costly than doctors' bills.

Thoughtful men have long since seen the necessity for training the body as well as the mind. They have long since known that however strong the mind, it can do little without strength of body. The public have at length begun to perceive and acknowledge this truth. Gymnasia are now considered almost as needful in Institutions of learning as Philosophical apparatus. This is well; every village Academy should have its gymnasium; but the gymnasium does not fully accomplish the desired object. It does not educate the bodies of all. The strong, vigorous, healthy youth will use the gymnasium, but those who need it most will shun it. The delicate, dyspeptic, moping, over-studious youth must be compelled to take exercise; for him the drill—the regular drill under an officer—made compulsory—the drill is the only means as yet discovered for him.

DISCIPLINE.

The discipline, though strict, is not oppressive, students of all departments and classes being treated with the most scrupulous impartiality. The object is to promote study, preserve order, and improve the morals.

The immediate supervision of the discipline and all matters pertaining to order are under an *Officer of the Barracks* whose rooms are in the Quarters. Under him is a cadet, chosen for his experience and efficiency, called the *Adjutant*, who assists him in his duties. The Seniors act in rotation as *Officer of the Day*. The duty of the *Officer of the Day* is, to attend at all roll calls, mark absences and improprieties, inspect rooms and report anything that he may see amiss during his term of office. As all may expect to hold this office in their turn, there is nothing in it to make it odious or irksome.

The students room in the University building, so long as the accommodations there are sufficient, two generally occupying each room. They furnish their own rooms,—this is often done, however, by purchasing, at reduced prices, furniture from those who have no longer use for it.

The Academic year is divided into three Terms. Charges for the year are accordingly divided into three payments.

ADMISSION.

Candidates for admission must be at least fourteen years old, and able to sustain a satisfactory examination in Arithmetic, Algebra through Simple Equations, English, Latin and Greek Grammar, Latin Reader, Sallust, Cicero's Select Orations, First Six Books of Virgil, Four Books of Xenophon's Anabasis, and Homer's Iliad, two Books, or its equivalent.

Candidates for admission into the Scientific Department are required to sustain a satisfactory examination in English Grammar, Geography, Arithmetic, and Algebra to Equations of the First Degree.

GOVERNMENT.

The Executive Government is vested in the Faculty.

Discipline.—The discipline is military in principle and form—*actual merit* is the only criterion of scholarship and character.

TEXT BOOKS.

Greek.—Xenophon's Anabasis and Memorabilia; Herodotus; Homer's Iliad and Odyssey; Greek Tragedies; Demosthenes De Corona, Olynthiacs and Philippics; Longinus; Plato's Defence of Socrates; Liddell and Scott's Greek Lexicon; Crosby's and Sophocles' Greek Grammar.

Latin.—Lincoln's Livy; Horace; Captivi of Plautus; Tacitus; Terence; Cicero De Oratore, and Tusculan Questions; Cicero's Brutus; De Officiis; Leverett's Lexicon; Andrews & Stoddard's Grammar; Sallust.

Mathematics.—Algebra, Davies' Bourbon; Geometry; Davies' Legendre; Trigonometry, Davies' Legendre; Surveying, Davies'; Navigation; Analytical Geometry, Descriptive Geometry, Dif. and Int. Calculus; Shades and Shadows, from Davies' Course; Mahan's Civil Engineering, Bartlett's Analytical Mechanics, Acoustics and Optics, and Astronomy.

Natural Sciences.—Lyell's Geology; Silliman's Chemistry; Dana's Mineralogy.

History.—Smith's Greece and Liddell's Rome; Hume's England.

Rhetoric.—Whately's Rhetoric; Themes and Declamations; Campbell's Rhetoric; Fowler's English Grammar, University Edition.

Philosophy.—Whately's Logic; Cousin's Psychology; Mahan's Intellectual Philosophy; Stewart's Philosophy of the Mind; Say's Political Economy; Kames' Elements; Paley's Evidences; Hickok's Moral Science.

GENERAL REGULATIONS.

The students of the University, in their military capacity, are styled CADETS.

Times for the commencement and continuation of study hours, for roll-calls, and meals, are regulated by the Faculty.

Hours for practical scientific operations, for the military exercises, and for field and other duties, are, from time to time, designated by the Faculty.

PROHIBITIONS AND DUTIES.

1. Every Cadet is prohibited going out of the limits of the village at any time, unless with permission, or on duty.

2. Gambling, or games of chance of any description, with or without cards; scuffling, and unnecessary noise, are prohibited. Every species of irregularity and immorality; in short, every thing contrary to the true principles of gentlemanlike conduct and military discipline is forbidden, and will be severely punished.

3. Loitering about taverns, or stores, or any other places of public resort is strictly prohibited.

4. Habits of industry and economy are urgently recommended and enforced.

5. Every Cadet is prohibited introducing or bringing spirituous liquors of any kind into the quarters, or keeping or allowing any to be kept in his room, on pain of expulsion.

6. Every Cadet is required to attend to his duties both as to time and place, with the greatest promptitude and decision; and when on duty of any kind, the strictest attention to the correct, efficient and energetic discharge of such duty is required.

7. Neatness and propriety of dress are required, and the arms and accoutrements must be kept in perfect order.

8. Each Cadet is required to make good all damages done to his arms and accoutrements, instruments and quarters, or their appurtenances.

9. The utmost neatness, both within, and in the vicinity of the quarters is required.

10. Discharging fire-arms, except in the regular routine of duty, or disturbing the peace in any manner whatever, is strictly prohibited.

11. Strict obedience to his superior officers is at all times required of every Cadet.

12. No Cadet is permitted to instruct while in the University, except under the direction of the Faculty.

13. Smoking tobacco is considered unbecoming a Cadet. The public practice of it is strictly prohibited.

14. Cadets are prohibited from leaving their quarters or rooms during study hours except by especial permission.

MILITARY DUTIES AND INSTRUCTION.

1. Every Cadet is required to appear at all dress parades, as well as on guard, in complete uniform, with his clothes, arms and equipments in perfect order.

2. The Cadets, in rotation, discharge the duties of officers, non-commissioned officers, officers of the guard, and commandants of parade.

3. Whenever a Cadet is acting in any official capacity, he is required to discharge all his duties agreeably to the principles and practice of strict military discipline, and with the gentlemanly independence becoming a soldier.

4. Whenever a Cadet is in the exercise of any command, he must be treated with the most perfect respect, and implict obedience yielded to his orders by all concerned.

5. In the military instruction, the same system of tactics is adopted as in the Army of the United States.

DRESS.

Every Cadet is required to provide himself with the uniform dress of the University, and at all times to be neatly and appropriately dressed. After the term in which he enters, every Cadet is required to wear the uniform of the University during term time, whenever he goes beyond the limits of the Quarters, unless special permission to the contrary is given.

PUBLIC WORSHIP.

Every Cadet is required to attend Church on the Sabbath.

VACATIONS AND FURLOUGHS.

1. Every Cadet is required to report himself immediately on his return, after the expiration of the vacation or of his furlough, and is from that time considered to be on duty. Absence, without sufficient excuse, beyond that time will incur demerit marks.

2. As frequent absences are very injurious to the progress of students, by interrupting their studies, and the regular order of their duties, no furlough will be given to any Cadet in term time, except in cases of sickness or other urgent necessity.

Parents and guardians are requested particularly to have regard to this regulation. Nothing is more injurious to the progress of the student than frequent absences during term time.

EXPENSES.

TUITION, per term, in University, for regular studies,	$14.50
ROOM-RENT, per term, - - - - -	3.50
LIGHTS AND FUEL, per week, about - - -	.30
BOARD, in private families, per week, -	2.00 to 2.50
MODERN LANGUAGES, per term, *each, extra*, - -	5.00
DRAWING, per term, *extra*, - - - -	4.00

Other incidental expenses, as for books, furniture, travelling expenses, in societies, &c., vary according to circumstances, and the habits of the Cadets.

REMARKS.

1. All certificates given at the time of dismission, will be made out strictly according to truth and the *real standing* of the student.

2. Bills for tuition and room-rent payable in advance.

3. At the beginning of each term, every student is required to deposit with Gen. Jackman, fifty cents incidental money. All careless or malicious damages to any of the buildings or approaches not otherwise accounted for, will be paid for at the end of the term from this provisionary fund. The remainder, should there be any, will be equally divided among the students.

4. Parents and guardians are requested not to furnish their sons and wards with more money than may be necessary for the discharge of their regular bills. Nothing tends more to demoralize students and make them idle than too large an allowance of pocket-money.

5. No deduction made in charges when a student leaves, except in cases of sickness.

COLLEGIATE COURSE OF STUDY.

YEAR I. YEAR II. YEAR III. YEAR IV.

FALL.	SPRING.	SUMMER.
Algebra, Roman History, Virgil, Latin Prose Composition, Xenophon's Anabasis, English Philology, Prosody, Historical Lectures.	Algebra finished, Geometry commenced, History of Greece, Xenophon's Memorabilia, Arnold's Latin Prose Composition, English Philology, Horace's Odes.	Geometry finished, English History, Horace's Odes, Epodes and Ars Poetica, Latin Versification, Herodotus commenced, Arnold's Latin Prose Composition, English Philology.
Chemistry, Campbell's Rhetoric, Herodotus, Horace's Satires, Cicero's Brutus, Homer, Arnold's Greek Prose Composition.	Trigonometry, Mensuration, Des. Geometry, Geology, Livy, Arnold's Greek Prose Composition, Homer, Mineralogy and Chemistry.	Surveying, Navigation, Shades and Shadows, Homer's Odyssey, Mineralogy, Livy continued, Greek Prose Composition, Geology and Physiology.
Analytical Geometry, Logic, Plautus' Captivi, Terence, Roman Antiquities, Æschylus' Septem contra Thebas.	Differential and Integral Calculus, Physiology, Natural History, Euripides, Cicero De Officiis, Grecian Antiquities.	Analytical Mechanics commenced, Laws of Nations, Juvenal and Persius. Euripides' Alcestis.
Analytical Mechanics completed, Constitution of United States, Political Economy commenced, Cousin's Psychology, Demosthenes and Longinus.	Acoustics and Optics, Mahan's Intellectual Philosophy, Stewart's Philosophy of the Mind, Political Economy completed, Kames' Elements, Tacitus, Cicero's Tusculan Questions.	Astronomy, Civil Engineering & Field Practice, Kames' Elements, Whately's Rhetoric, Owen's Thucydides.

NOTE—Recitations every Monday morning in Paley's Natural Theology, Moral Science, or other books of a religious or moral character.

Themes and Declamations weekly, throughout the Course.

Modern Languages, and Drawing in all its departments, taught as extras.

SCIENTIFIC COURSE OF STUDY.

YEAR I.		YEAR II.		YEAR III.	
FALL.	SPRING.	SUMMER.			
Algebra, Geometry, Roman History, English Philology, Historical Lectures.	Algebra, Geometry, Trigonometry, Mensuration, Descriptive Geometry, History of Greece, English Philology.	Algebra, Geometry, Surveying, Navigation, Shades and Shadows, English History, English Philology.			
Analytical Geometry, Campbell's Rhetoric, Chemistry; Experiments and Lectures; English Philology.	Differential and Integral Calculus, Geology, Locke's Cond. of Human Understanding, Selections from Locke on the Human Understanding. Mineralogy and Chemistry,	Analytical Mechanics commenced, Mineralogy, Laws of Nations. Geology and Physiology.			
Analytical Mechanics completed, Logic, Constitution United States, Political Economy commenced, Cousin's Psychology.	Acoustics and Optics, Political Economy completed, Mahan's Intellectual Philosophy, Stewart's Philosophy of the Mind. Kames' Elements.	Astronomy, Civil Engineering and Practice, Kames' Elements, Whately's Rhetoric.	Field		

NOTE—Recitations every Monday morning in Paley's Natural Theology, Moral Science, or other books of a religious or moral character.
Themes and Declamations weekly, throughout the Course.
Modern Languages, and Drawing in all its departments, taught as extras.

CALENDAR.

ACADEMIC YEAR, 1863–64.

1863.

Sept. 17. First Term begins—Thursday evening.

Dec. 24. First Term ends—Thursday morning.

WINTER VACATION, FOUR WEEKS.

1864.

Jan. 21. Second Term begins—Thursday evening.

March 10. Middle of Spring Term (see page 15.)

April 28. Second Term ends—Thursday morning.

SPRING VACATION, TWO WEEKS.

May 12. Third Term begins—Thursday evening.

Aug. 18. Commencement—Thursday.

SUMMER VACATION, FOUR WEEKS.

ACADEMIC YEAR, 1864-65.

Sept. 15. First Term begins—Thursday evening.

Dec. 22. First Term ends—Thursday morning.

4c

8. Discharging fire arms, (
prohibited.
9. Strict obedience to his
10. No Cadet is permitted
11. Smoking tobacco is oo
12. Cadets are prohibited f

Sir: Your attention to the present co

On the night of the 13th of March last, years served as Cadet Quarters, was burn of the University in the North Barrack, s will be sufficient, it is thought, for the Un it is expected, in little over a year's time, ed was put at its head in January last, its its Alumni and other friends; and at the one hundred thousand dollars.

The patrons of the University will not the requirements for entering remaining answer the requirements felt by young m

The degree of Bachelor of Science will years of the course. The degree of Civil

The Alumni of the Institution feel that general College instruction fits him for th sions like the war just past. Our most p received such an education as is here offe but they had joined to their natural abil their success. But military discipline is constitution, and manly bearing, and fits ed States, not alone on the field of battl strength, energy and endurance.

The exercises of each day c ship on Sunday. For this pur will attend.

Every Cadet is required to r and is from that time consider

As frequent absences are ve of their duties, no furlough wil

Every Cadet is required to p appropriately dressed. After during term time whenever he

The students are publicly ex have been pursued by the Class of this examination are publicly

The following

One Prize for the best drilled

ME

The students room in the Un this is often done, however, by

In order to revive the Univer men who are good musicians an

Tuition, per Term, in Univers
Room Rent per Term.....
Other incidental expenses for the habits of the Cadets. No d Tuition covers instruction in all

ACADEMIC YEAR 1865-66.—Ju tion six weeks.

ACADEMIC YEAR 1866-67.—Se evening. Dec. 20, First Term e

[redacted]

ular routine of duty, or disturbing the peace in any manner whatever, is strictly

ers is at all times required of every Cadet.
hile in the University, except under the direction of the Faculty.
ecoming a Cadet. The public practice of it is strictly prohibited.
their quarters or rooms during study hours except by special permission.

PUBLIC WORSHIP.

th prayers in the College Chapel. All Cadets are required to attend public wor-
ne reports to the President, at the beginning of the term, the church which he

VACATIONS AND FURLOUGHS.

lf immediately on his return, after the expiration of his Vacation or Furlough,
duty. Absence without sufficient excuse will incur demerit marks.
to the progress of students, by interrupting their studies, and the regular order
any Cadet in term time, except in cases of sickness or other urgent necessity.

DRESS.

self with the uniform dress of the University, and at all times to be neatly and
which he enters, every Cadet is required to wear the uniform of the University
the limits of the Quarters, unless special permission to the contrary is given.

EXAMINATION.

ing the last two weeks of the Summer Term, in all the studies of that year, which
ey respectively belong and their attainments marked and recorded. The results
wn in the Chapel, and exhibited to the Corporation at Commencement.

PRIZES 1866.

o be publicly awarded on Commencement day, August 2, 1866.
l in Artillery. Two Prizes for the best drilled men in the Manual of Arms.

MISCELLANEOUS.

ldings, two generally occupying each room. They furnish their own rooms,—
at reduced prices, furniture from those who have no longer use for it.
nd reward military service, the College expenses will be remitted to ten young
served honorably in the Union Army.

EXPENSES.

..... $20,00 Lights and fuel, per week, about ,50
..... 5,00 Board in private families, per week, from 3,25 to 4,00
niture, travelling expenses, societies, etc., vary according to circumstances, and
ade in the charges when a student leaves, except in case of sickness. The above
ts of the University. College expenses are to be paid in advance,

CALENDAR.

Examination of Classes. Aug. 2, Commencement — Thursday. Summer vaca-

umination of candidates for admission. Sept. 13, First Term begins—Thursday
sday morning. Winter vacation four weeks.

CATALOGUE

OF

NORWICH UNIVERSITY,

FOR

1865-66.





W. L. Gilbert

CATALOGUE

OF THE

CORPORATION, OFFICERS, AND CADETS

OF

NORWICH UNIVERSITY

FOR THE ACADEMIC YEAR

1865-66.

NORWICH, VERMONT:
PRINTED FOR THE UNIVERSITY.

CORPORATION.

TRUSTEES.

Rev. EDWARD BOURNS, LL. D., EX OFFICIO,	PRESIDENT.
Rev. JOSIAH SWETT, D. D.,	SECRETARY.
F. L. OLDS, Esq.,	TREASURER.

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Hon. REUBEN DAVIS,	*Cornish, N. H.*
Col. SAMUEL NUTT,	*Hartford.*
HORACE WEBSTER, LL. D.,	*New York City.*
JULIUS Y. DEWEY, M. D.,	*Montpelier.*
Gen. STEPHEN THOMAS,	*West Fairlee.*
Hon. EDMUND WESTON,	*West Randolph.*
Hon. TIMOTHY P. REDFIELD,	*Montpelier.*
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Hon. DUDLEY C. DENISON,	*Royalton.*
Hon. WILLIAM HEBARD,	*Chelsea.*
GEORGE R. CHAPMAN, Esq.,	*Woodstock.*
R. RICHARDSON, Esq.,	*Montpelier.*
H. BLOOD, Esq.,	*Norwich.*
CURTIS BACON, Esq..	*Middletown, Ct.*
Rev. MALCOLM DOUGLASS,	*Windsor.*
Hon. A. P. HUNTON,	*Bethel.*
Col. HENRY O. KENT,	*Lancaster, N. H.*
JOHN L. FARWELL, Esq.,	*Claremont, N. H.*
Rev. ROGER S. HOWARD,	*Rutland.*

FACULTY.

REV. EDWARD BOURNS, LL. D., PRESIDENT,
AND PROFESSOR OF MORAL, INTELLECTUAL, AND POLITICAL PHILOSOPHY.

ALONZO JACKMAN, LL. D.,
PROFESSOR OF MATHEMATICS, NATURAL PHILOSOPHY, AND MILITARY SCIENCE.

_____ _____,*
PROFESSOR OF THE LATIN AND GREEK LANGUAGES AND LITERATURES.

HENRI LOUIS DELESCLUZE, A. M.,
PROFESSOR OF THE FRENCH AND SPANISH LANGUAGES AND LITERATURES,
AND OF LINEAR, ARCHITECTURAL AND LANDSCAPE DRAWING.

THOMAS RUSSELL CROSBY, M. D.,
PROFESSOR OF CHEMISTRY, PHYSIOLOGY, AND NATURAL HISTORY.

CAPT. SAMUEL WALKER SHATTUCK, B. S.,
ADJUNCT PROFESSOR OF MATHEMATICS, HISTORY AND MILITARY TACTICS.

_____ _____,*
TUTOR IN LATIN AND GREEK.

* Classes at present recite to the President.

CAPT. SAMUEL WALKER SHATTUCK, B. S.,
EXECUTIVE OFFICER AND LIBRARIAN.

ADJUTANTS.

CLASS OF '65.

2d. OSCAR BARRON CHILD,
3d. WILLIAM WOODBURY HOWARD,

SPRING TERM, 1865.

4th. JOHN JASPER DEWEY,

SUMMER TERM, 1865.

CLASS OF '66.

1st. GEORGE BRAINARD BLODGETT,

FALL TERM, 1865.

ASSISTANT LIBRARIANS.

REUEL SMALL.
CHARLES MONTGOMERY REED

GRADUATES OF 1865.

Names.	Residences.
* Bottomly, Frank Timothy,	*Cherry Valley, Mass.*
Boyd, John Curry,	*Boston, Mass.*
Child, Oscar Barron,	*West Randolph.*
Dewey, John Jasper,	*Quechee.*
Howard, Henry Augustus,	*Windsor.*
Howard, William Woodbury,	*Hallowell, Me.*
Richards, Joseph Swift,	*Geneva, N. Y.*
Smart, Charles Henry,	*Lowell, Mass.*

GRADUATES 8.

* Deceased.

UNDERGRADUATES.

SENIORS.

Names.	Residences.
Blodgett, George Brainard,	*Rowley, Mass.*
Daniels, Willis Kimball,	*Plainfield, N. H.*
Davis, Frank J.,	*Falmouth, Mass.*
Eaton, William B., Jr.,	*North Chelsea, Mass.*
Glidden, John Mills,	*Junior Furnace, Ohio.*
Lefavor, Wilton Fields,	*Columbus, Ohio.*
Needham, William C.,	*Groton, Mass.*
Reed, Charles Henry,	*Bridgewater, Mass.*
Small, Reuel,	*Auburn, Me.*
*Thorndike, Thomas Stevens,	*Beverly, Mass.*
Tolles, Clarence Weston,	*Claremont, N. H.*
Whittier, James Anson L.,	*Gorham, Me.*

SENIORS 12.

* Deceased.

JUNIORS.

Names.	Residences.
Bachelder, Fred. Ernest,	*Oldtown, Me.*
Benson, Seth Henry,	*Blackstone, Mass.*
Bird, Charles Sigourney,	*Boston, Mass.*
Burkham, Edward G., Jr.,	*Cincinnati, Ohio.*
Burr, Charles Philip,	*Batesville, Ark.*
Davis, George A.,	*Danville.*
Fiske, William,	*Roxbury, Mass.*
Gilbert, N. Allen,	*Fairfield.*
Gowdy, Francis Marion,	*Broad Brook, Ct.*
* Head, Henry Hopkins,	*Montgomery.*
Hill, Howard F.,	*Concord, N. H.*
Hooper, William Henry, Jr.,	*West Medford, Mass.*
Hurlbut, Myron Robert,	*Grand Isle.*
Lothrop, George Langdon,	*East Lexington, Mass*
Lowe, Abner Barnard,	*Enfield, N. H.*
Morgan, Charles Augustus,	*Albany, N. Y.*
Page, Frank A.,	*McIndoe's Falls.*
Reed, Charles Montgomery,	*West Bridgewater, Mass.*
Smith, William Steele,	*Brooklyn, N. Y.*
Stowell, E. A.,	*Boston, Mass.*
* Thorp, William W., Jr.,	*St. Albans.*
Walton, Wesley Kimball,	*Auburn, Me.*
Whitmore, Arthur Herbert	*Housatonic, Mass.*
Wyman, Silas Wait,	*Augusta, Me.*

JUNIORS 24.

SOPHOMORES.

Names.	Residences.
Johnson, Alexander Bryan,	*Washington, D. C.*
Marseilles, Charles,	*Philadelphia, Pa.*
Nichols, George Gideon,	*Saugerties, N. Y.*

SOPHOMORES 3.

FRESHMEN.

Names.	Residences.
Bowen, Marcellus,	*Nebraska City, N. T.*
Chamberiin, J. K. Polk,	*Pomfret.*
Clark, Lewis S.,	*Winthrop, Me.*
Cowles, Henry E. S ,	*Claremont, N. H.*
Cutter, William R.,	*Boston, Mass.*
Ellis, Nathaniel W.,	*Southampton, N. H.*
Fox, Walter H.,	*Boston, Mass.*
Goss, Frank Allen,	*Vergennes.*
Granger, Charles H,.	*Norwich.*
Grosvenor, Robert,	*Providence, R. I.*
Hobart, Walter Henry,	*East Bridgewater, Mass.*
Hunt, William Henry,	*St. Albans,*
Hutchinson, John D.,	*Norwich.*
Keene, Richard Tubbie,	*New York City.*

Names.	Residences.
Lindsey, Winslow M.,	*Laconia, N. H.*
Noble, Thomas C., Jr.,	*Augusta, Me.*
Rouse, Frank S.,	*Augusta, Me.*
Sabin, G. K.,	*Windsor.*
Shumway, Fred.,	*Chesterfield, N. H.*
† Skinner, Henry,	*Malone, N. Y.*
Smith, William C.,	*Portland, Me.*
Sweet, William E. C.,	*Sweetsburg, C. E.*
Walbridge, John Henry,	*Troy, N. Y.*
Wallingford, Charles R.,	*Milford, N. H.*
Whiting, Frank M.,	*North Attleboro', Mass.*
Willmarth, Albert W.,	*Stamford.*
Wood, Thomas Chalmers,	*St. Louis, Mo.*

FRESHMEN 28.

† Partial Course.

SUMMARY.

SENIORS, - - - - -	12
JUNIORS, - - - - - -	24
SOPHOMORES, - - - - -	3
FRESHMEN, - - - - - -	28
TOTAL, - . -	67

DRILL SERGEANTS.

Gowdy, Francis Marion,
Lefavor, Wilton Fields,
Morgan, Charles Augustus,
Reed, Charles Henry,
Small, Reuel,
Whittier, James A. L.

OFFICERS OF PASSAGES.

SPRING TERM, 1865.

No. 1. Whitmore, Arthur H.,
2. Dewey, John J.,
3. Howard, Henry A.,
4. Hill, Howard F.

SUMMER TERM, 1865.

No. 1. Granger, Charles H.,
2. Smart, Charles H.,
3. Blodgett, George B.,
4. Gilbert, N. Allen.

FALL TERM, 1865.

No. 1. Morgan, Charles A.,
2. Whittier, James A. L.,
2. Reed, Charles H.,
4. Gilbert, N. Allen.

ADMISSION.

Candidates for admission to the Freshman Class must be at least fourteen years old, and able to sustain a satisfactory examination in the Grammar of the Latin and Greek Languages, Virgil, (six Books of the Æneid,) Cæsar's Commentaries or Sallust, Homer's Iliad, (two books,) Xenophon's Anabasis, Arnold's Latin Prose Composition (eight Chapters,) Algebra to Quadratic Equations, Arithmetic, particularly in Fractious and the Extraction of Roots.

Real equivalents will be accepted instead of the Text-Books named.

Candidates for admission to the Scientific Department are required to sustain a thorough examination in English Grammar, Geography, Arithmetic, particularly in Fractions and Evolution, in Algebra to Quadratic Equations.

Candidates for admission to the Classical Department are expected to appear for examination on Tuesday before Commencement. Candidates for admission to the Scientific Department are expected to enter their names as early as Tuesday before Commencement, and to appear for examination on Wednesday before the beginning of the Fall Term.

Candidates who are prepared to join an advanced Class are always allowed to do so.

Owing to a change of Terms, students will be allowed to enter tbe University this Acadenic year on March 1 ; examination one day earlier.

COURSE OF STUDY.

CLASSICAL DEPARTMENT.

FRESHMAN CLASS.

FIRST TERM.

Latin.	Livy (Lincoln's).
Greek.	Xenophon's Memorabilia,
Mathematics.	Algebra (Davies' Bourdon).
History.	Liddell's Rome.

SECOND TERM.

Latin.	Horace's Odes and Epodes.
Greek.	Homer.
Mathematics.	Algebra completed ; Geometry (Davies') commenced.
History.	Smith's Greece.

THIRD TERM.

Latin.	Cicero's De Officiis or Oratore.
Greek.	Homer. Herodotus.
Mathematics.	Geometry completed.
History.	Hume's England.

Arnold's Latin and Greek Prose Composition through the year.

SOPHOMORE CLASS.

FIRST TERM.

Latin.	Satires and Epistles of Horace.
Greek.	Æschylus or Sophocles.

SECOND TERM.

Latin. Juvenal and Persius.
Greek. Euripides' Alcestis and Medœa.
Mathematics. Trigonometry ; Mensuration and Des. Geometry.
Geology. (Lyell's.)

THIRD TERM.

Latin. Tacitus; and Plautus' Captivi.
Greek. Demosthenes' De Corona, or Æschines.
Mathematics. Shades and Shadows ; Surveying, (Davies' Works.)
Mineralogy. (Dana's.)
Roman and Grecian Antiquities through the year.

JUNIOR CLASS.

FIRST TERM.

Latin. Terence.
Mathematics. Analytical Geometry, (Davies'.)
Rhetoric. (Campbell's.)
Political Philosophy. Guizot's History of Civilization.
French. Chouquet's Spelling Lessons ; Fasquelle's Grammar.
Drawing.

SECOND TERM.

Greek. Thucydides. (Owen's.)
Mathematics. Differential and Integral Calculus, (Church's.)
Political Philosophy. Democracy of America, (De Tocqueville's.)
French. Williams' Conversation ; Perrin's Fables.
Drawing.

THIRD TERM.

Latin. Cicero's Tusculan Questions.
Mathematics. Calculus completed.
Natural Philosophy. Mechanics (Bartlett's) commenced.
Political Philosophy. Say's Political Economy, and Constitution of the United States.
French. Paul and Virginia ; Fasquelle's Grammar.
Drawing.

NOTE—Spanish Language elective.

SENIOR CLASS.

FIRST TERM.

Nautral Philosophy. Mechanics completed.
Political Philosophy. Law of Nations, (Vattel's.)
Logic Whately's Elements.
French. Michelet's History ; Poitevin's Grammar.
Drawing.

SECOND TERM.

Natural Philosophy. Acoustics and Optics. (Bartlett's.)
Intellectual Philosophy. (Mahan's.) Also, Cousin's Psychology and Kames' Elements.
French. Moliere.
Drawing.

THIRD TERM.

Natural Philosophy. Astronomy and Civil Engineering.
Moral Philosophy. Hickock's Moral Science.
Rhetoric. (Whately's.)

Recitations every Monday morning in Paley's Natural Theology, Butler's Analogy, or other books of a religious or moral character.

Themes and Declamations weekly, throughout the Course.

SCIENTIFIC DEPARTMENT.

FIRST YEAR.

FIRST TERM.

Mathematics.	Algebra, (Davies' Bourdon,) Geometry, (Davies'.)
History.	Liddell's Rome.
Rhetoric.	English Philology, (Fowler's.)
* *French.*	
* *Drawing.*	

SECOND TERM.

Mathematics.	Algebra, Geometry, Trigonometry, Mensuration,. Descriptive Geometry.
History.	Smith's Greece.
* *French.*	
* *Drawing.*	

THIRD TERM.

Mathematics.	Algebra, Geometry, Surveying, Shades and Shadows.
History.	Hume's England.
* *French.*	
* *Drawing.*	

* Elective.

JUNIOR CLASS.

FIRST TERM.

Mathematics.	Analytical Geometry. (Davies',)
Chemistry.	(Silliman's.)
Political Philosophy.	Guizot's History of Civilization.
Physiology.	(Hitchcock's.)
Rhetoric.	(Campbell's.)

SECOND TERM.

Mathematics. Differential and Integral Calculus, (Church's.)

Geology. (Lyell's.)

Political Philosophy. Democracy of America, (De Tocqueville's.)

French. Williams' Conversations; Perrin's Fables.

Drawing.

THIRD TERM.

Mathematics. Calculus completed.

Natural Philosophy. Mechanics (Bartlett's) commenced.

Mineralogy. (Dana's.)

Political Philosophy. Say's Political Economy, and Constitution of the United States.

*French.** Paul and Virginia. Fasquelle's Grammar.

Drawing.

SENIOR CLASS.

Same as studies of the Senior Class in Classical Department.

NOTE—Spanish Language elective.

* French only is spoken in Classes during the second year.

Recitations every Monday morning in Paley's Natural Theology, Butler's Analogy, or other book of a religious or moral character.

Themes and Declamations throughout the Course.

MILITARY SCIENCE

Taught practically and theoretically.

INFANTRY.

School of Soldier and Company. Manœuvres of the Skirmish Line. Evolutions of the Battalion, Brigade and Corps D' Armee.

ARTILLERY.

Nomenclature and description of the different kinds and parts of Artillery Gun-Carriages, Caissons, and other Artillery Carriages, of Artillerists' Instruments, Military Projectiles; Exercise of the Field Piece, and Evolutions of Field Batteries of Artillery.

TEXT-BOOKS.

Army Regulations, Infantry and Artillery Tactics same as used in the U. S. Army, Mahan's Treatise on Guard and Out-Post Duty, Mahan's Field Fortifications, Mahan's Permanent Fortifications, Jomini's Art of

NORWICH UNIVERSITY.

Norwich University is the only regularly chartered Institution in the Northern States, which combines full Classical, Scientific, and Military Curricula.

CLASSICAL DEPARTMENT.

At this Institution the Latin and Greek Classics are pursued to the same extent and with the same thoronghness as at other American Colleges of the highest standing.

The studies are so arranged that the students in the Classical and other Departments recite together in all the subjects which are common to both. Students in all Departments are regarded and treated in every respect as equals in their respective Classes. The Classical have no privileges which are not fully enjoyed by the Scientific.

SCIENTIFIC DEPARTMENT.

Norwich University was the first Institution in this country to introduce a complete Scientific Course of its instruction.

MILITARY SCIENCE.

The feature, which distinguishes Norwich University from other Collegiate Institutions, is the department of Military Science and Tactics.

Agreeably to the provisions of its Charter, the students are under Military Discipline — are called Cadets — and dress in uniform. All the arms and equipments necessary for drills are furnished by the State of Vermont.

It may not be out of place here to state, that the present President of the University is ready to resign the position, to accept a Professorship, on condition that some Military gentleman of well known standing is put at the head of the Institution. In order to command the services of a prominent officer the Alumni, past Cadets and friends of the University have pledged a liberal salary. It is expected that the change will be made in a few months.

The Alumni and friends of the University hope by the above course to put it upon a standing which its past history demands. They feel confident that the people will uphold them in giving the Institution a higher Military character. They remember its many patrons while the noble and accomplished officers Partridge and Ransom filled its Presidential chair. The Alumni of the Institution feel that the character of the education offered is the best possible for a young man. The general College instruction fits him for the duties of the civilian, while the Military element gives him a reserve for occasions like the war just past. Our most prominent Generals at the present time, Grant, Sherman, Howard, Dodge and others received such an education as is here offered. All of the officers above named were civilians at the breaking out of the war; but they had joined to their natural abilities that which many others had not—A SCIENTIFIC MILITARY EDUCATION—hence their success. But Military discipline is desirable for other reasons. It strengthens the body, gives to youth a vigorous constitution, and a manly bearing, and fits them to serve their country according to the spirit of the Constitution of the United States, not alone on the field of battle, but every where, in all employments and departments of life, which demand strength, energy and endurance. Its regular and systematic training of the body, is highly conducive to perfect physical development, and the preservation of health. Many instances can be shown where broken health and debilitated constitutions have been restored, and invigorated, health and strength acquired, when physicians and friends had begun to despair, and all this advantage is attained by means agreeable in themselves, and far less costly than doctors' bills.

Thoughtful men have long since seen the necessity for training the body as well as the mind. They have long since known that however strong the mind, it can do little without strength of the body. The public at length perceive and acknowledge this truth. Gymnasia are now considered almost as needful in Institutions of learning as Philosophical apparatus. This is well; every village Academy should have its Gymnasium; but the Gymnasium does not fully accomplish the desired object. It does not educate the bodies of all. The strong, vigorous, healthy youth will use the Gymnasium, but those who need it most will shun it. The delicate, dyspeptic, moping, over-studious youth must be compelled to take exercise, and for him the Military drill and discipline are the only means as yet discovered.

EXAMINATION.

The Students are publicly examined, during the last two weeks of the Summer Term, in all the studies which have been previously pursued by the class to which they respectively belong, and their attainments marked and recorded. The results of this examination are publicly made known in the Chapel, and exhibited to the Corporation at Commencement.

DEGREES.

BACHELOR OF ARTS.

The Degree of Bachelor of Arts is conferred on Students who have completed the studies of the Classical Department and have been approved, on examination at the end of the course, as candidates for the same.

BACHELOR OF SCIENCE.

The Degree of Bachelor of Science is conferred on Students who have completed the studies of the Scientific Department and have been approved, on examination at the end of the Course, as candidates for the same.

MASTER OF ARTS.

The Degree of Master of Arts is conferred on every Bachelor of Arts of three years' standing, or more,—who, in the interval, has sustained a good moral character and who has been engaged in literary pursuits,—on application to the President, one week, at least, before Commencement.

The fee, including the Diploma, is *ten dollars*, payable in advance.

MASTER OF SCIENCE.

The Degree of Master of Science is conferred, on payment of the usual fee, on such members of the Resident Graduates' Class as shall have satisfactorily completed two years of advanced study, and on all such Graduates of the Scientific Department as shall have been diligent and successful in liberal studies and pursuits for four years after graduating.

The fee, including the Diploma, is *five dollars*, payable in advance.

RESIDENT GRADUATES.

Graduates of this or other Colleges, desirous of pursuing their studies in Norwich, are allowed, as Resident Graduates, to attend the Public Lectures of the University, and to use the Library and Scientific Collections, subject to such rules as the Faculty may establish.

APPARATUS.

In addition to the usual apparatus for illustrating the several branches of Physical Science, the University is furnished with the best instruments now used in Practical Surveying and Engineering.

REGULATIONS.

DISCIPLINE.

Students of all departments and classes are treated with the most scrupulous impartiality. The object is to promote study, preserve order, and improve the mo rals.

The immediate supervision of the discipline and all matters pertaining to order are under a member of the faculty styled the *Executive Officer* whose rooms are in the Quarters. Under him is a cadet, chosen for his experience and efficiency, called the *Adjutant*, who assists him in his duties. The Seniors act in rotation as *Officer of the Day*.

All orders coming from the *Adjutant* or *Officer of the Day* are to be considered as emanating from proper authority and obeyed accordingly.

The duty of the *Officer of the Day* is, to attend at all roll calls, mark absences and improprieties, inspect rooms and report anything that he may see amiss during his term of office.

PROHIBITIONS AND DUTIES.

1. Every Cadet is prohibited going out of the limits of the village at any time, unless with permission or on duty.

2. Gambling, or games of chance of any description, with or without cards; scuffling, and unnecessary noise, are prohibited. Every species of irregularity and immorality: in short, every thing contrary to the true principles of gentlemanlike conduct and military discipline is forbidden, and will be severely punished.

3. Loitering about hotels, or stores, or any other places of public resort is strictly prohibited.

4. Every Cadet is prohibited introducing or bringing spirituous liquors of any kind into the quarters, or keeping or allowing any to be kept in his room, on pain of expulsion.

5. Every Cadet is required to attend to his duties both as to time and place, with the greatest promptitude and decision; and when on duty of any kind, the strictest attention to the correct, efficient and energetic discharge of such duty is required.

6. Each Cadet is required to make good all damages done to his arms and accoutrements, instruments and quarters, or their appurtenances.

7. The utmost neatness, both within, and in the vicinity of the quarters is required.

8. Discharging fire arms, except in regular routine of duty, or disturbing

9. Strict obedience to his superior officers is at all times required of every Cadet.

10. No Cadet is permitted to instruct while in the University, except under the direction of the Faculty.

11. Smoking tobacco is considered unbecoming a Cadet. The public practice of it is strictly prohibited.

12. Cadets are prohibited from leaving their quarters or rooms during study hours except by special permission.

MILITARY DUTIES AND INSTRUCTION.

1. Every Cadet is required to appear at all dress parades, as well as on guard, in complete uniform, with his clothes, arms and equipments in perfect order.

2. The Cadets, in rotation, discharge the duties of officers, non-commissioned officers, officers of the guard, and commandants of parade.

3. Whenever a Cadet is acting in an official capacity, he is required to discharge all his duties agreeably to the principles and practice of strict military discipline, and with the gentlemanly independence becoming a soldier.

4. Whenever a Cadet is in the exercise of any command, he must be treated with the most perfect respect, and implicit obedience yielded to his orders by all concerned.

DRESS.

Every Cadet is required to provide himself with the uniform dress of the University, and at all times to be neatly and appropriately dressed. After the term in which he enters, every Cadet is required to wear the uniform of the University during term time whenever he goes beyond the limits of the Quarters, unless special permission to the contrary is given.

VACATIONS AND FURLOUGHS.

Every Cadet is required to report himself immediately on his return, after the expiration of his Vacation or Furlough, and is from that time considered to be on duty. Absence, without sufficient excuse, will incur demerit marks.

As frequent absences are very injurious to the progress of students, by interrupting their studies, and the regular order of their duties, no furlough will be given to any Cadet in term time, except in cases of sickness or other urgent necessity.

Parents and guardians are requested particularly to have regard to this regulation. Nothing is more injurious to the progress of the student than frequent absences during term time.

PUBLIC WORSHIP.

The exercises of every day commence with prayers in the College Chapel. All Cadets are required to attend public worship on Sunday. For this purpose, each one reports to the President, at the beginning of the term, the church which he will attend.

MISCELLANEOUS.

Times for the commencement and continuation of study hours, for roll-calls and meals, are regulated by the Faculty.

Hours for practical scientific operations, for the military exercises, and for field and other duties, are, from time to time designated by the Faculty.

The students room in the University buildings, two generally occupying each room. They furnish their own rooms,—this is often done, however, by purchasing, at reduced prices, furniture from those who have no longer use for it.

EXPENSES.

Tuition, per Term, in University, - . -	$20.00
Room Rent per Term, - - - -	5.00
Lights and fuel. per week, about - - -	50
Board in private families, per week, -	from 3.25 to 4.00

Other incidental expenses for books, furniture, travelling expenses, Societies, &c., vary according to circumstances, and the habits of the Cadets.

No deduction made in the charges when a student leaves, except in cases of sickness.

PRIZES.

1865.

The following Prizes were publicly awarded on Commencement day, August 10, 1865 :

One Prize for the best drilled Gun-Squad in Artillery.

" Squad No. 2."

Commander,

GEORGE BRAINARD BLODGETT, Rowley, Mass.

Two Prizes for excellence in Oratory :

First Prize—WILLIAM C. H. NEEDHAM, Groton, Mass.

Second Prize—GEORGE GIDEON NICHOLS, Saugerties, N. Y.

PRIZES 1866.

The following Prizes are to be publicly awarded on Commencement day, August 2, 1866 :

One Prize for the best drilled Gun-Squad in Artillery.

Two Prizes for the best drilled men in the Manual of Arms.

Two Prizes for excellence in Oratory.

Two Prizes for excellence in English Composition.

CALENDAR.

Academic Year 1865–66.

Jan. 9. Second Term begins—Wednesday evening.

Feb. 28. Examination of candidates for admission to the Scientific Department.

April 19. Second Term ends—Thursday morning.

SPRING VACATION TWO WEEKS.

May 3. Third Term begins—Thursday evening.

July 23–28. Examination of Classes.

July 31. Examination of candidates for admission to the Classical Department.

July 31. Prize Declamation by the Junior and Sophomore Classes.

August 2. Commencement—Thursday.

SUMMER VACATION SIX WEEKS.

Academic Year 1866–67.

Sept. 12. Examination of candidates for admission to the Scientific Department.

Sept. 13. First Term begins—Thursday evening.

Dec. 20. First Term ends—Thursday morning.

Sent to Treasurer
Aug 19, 1867

CATALOGUE

OF

Norwich University,

FOR

1866-7.

CATALOGUE

OF THE

CORPORATION, OFFICERS, AND CADETS

OF

NORWICH UNIVERSITY,

FOR THE ACADEMIC YEAR

1866-67.

NORTHFIELD, VERMONT:

PRINTED FOR THE UNIVERSITY.

CORPORATION.

BOARD OF TRUSTEES.

BREV'T-MAJ. THOMAS W. WALKER, EX OFFICIO, PRESIDENT.
REV. JOSIAH SWETT, D. D., *Burlington*, SECRETARY.
HON. GEORGE NICHOLS, M. D., *Northfield*, TREASURER.

GEN. JAMES T. PRATT,	*So. Glastenbury, Conn.*
COL. SAMUEL NUTT,	*Hartford.*
HORACE WEBSTER, LL. D.,	*New York City.*
JULIUS Y. DEWEY, M. D.,	*Montpelier.*
GEN. STEPHEN THOMAS,	*West Fairlee.*
HON. EDWARD WESTON,	*West Randolph.*
HON. TIMOTHY P. REDFIELD,	*Montpelier.*
REV. JOSIAH SWETT, D. D.,	*Burlington.*
HON. DUDLEY C. DENISON,	*Royalton.*
HON. WILLIAM HEBARD,	*Chelsea.*
GEORGE R. CHAPMAN, ESQ.,	*Woodstock.*
HON. RODERICK RICHARDSON,	*Montpelier.*
HENRY BLOOD, ESQ.,	*Norwich.*
CURTIS BACON, ESQ.,	*Middletown, Conn.*
REV. MALCOLM DOUGLASS,	*Windsor.*
HON. A. P. HUNTON,	*Bethel.*
COL. HENRY O. KENT,	*Lancaster, N. H.*
REV. ROGER S. HOWARD,	*Rutland.*
VICTOR ATWOOD, ESQ.,	*St. Albans.*
REV. JAMES H. EAMES, D. D.,	*Concord, N. H.*
HON. GEORGE NICHOLS, M. D.,	*Northfield.*
PHILANDER D. BRADFORD, M. D.,	*Northfield.*
PERLEY BELKNAP, ESQ.,	*Northfield.*

MEMBERS OF THE FACULTY
AND OTHER OFFICERS.

BREV'T.-MAJ. THOMAS W. WALKER, CAPT. U. S. A.,
President, and Professor of Military Science.

CAPT. SAMUEL W. SHATTUCK,
Vice President, and Adjunct Professor of Military Science.

REV. EDWARD BOURNS, LL. D.,
Professor of Moral, Intellectual, and Political Philosophy.

ALONZO JACKMAN, LL. D.,
Professor of Mathematics and Natural Philosophy.

_____ _____,*
Professor of the Latin and Greek Languages and Literatures.

HENRI LOUIS DELESCLUZE, A. M.,
Professor of the French and Spanish Languages and Literatures, and of Linear, and Architectural and Landscape Drawing.

PHILANDER D. BRADFORD, M. D.,
Professor of Natural Science and Physiology.

CAPT. SAMUEL W. SHATTUCK,
Secretary of the Faculty, and Librarian.

*Classes for the present recite to the Professor of Moral Philosophy

CADET OFFICERS.

ADJUTANTS.

SPRING TERM, 1866.....CADET CHARLES H. REED—Class '66.
" " " CADET WILLIAM C. NEEDHAM—Class '66.
SUMMER TERM, 1866....CADET REUEL SMALL—Class '66.
FALL TERM, 1866.... ..CADET FRANCIS M. GOWDY—Class '67.
SPRING TERM, 1867.....CADET MYRON R. HURLBURT—Class '67.

ASSISTANT LIBRARIAN,

CADET MYRON R. HURLBURT—CLASS '67.

DRILL SERGEANTS,

CLASS '67.

WESLEY K. WALTON, SETH H. BENSON.

CLASS '68.

G. K. SABINE, CHARLES R. WALLINGFORD.

OFFICERS OF PASSAGES.

SPRING TERM, 1866.

SETH H. BENSON, G. K. SABINE, WESLEY K. WALTON.

SUMMER TERM, 1866.

MYRON R. HURLBURT, CHAS. R. WALLINGFORD.

FALL TERM, 1866.

ROBERT GROSVENOR.

SPRING TERM, 1867.

NATHANIEL W. ELLIS.

GRADUATES OF 1866.

NAMES.	RESIDENCES.
William C. H. Needam,	*Groton, Mass.*
Charles Henry Reed,	*Bridgewater, Mass.*
Ruel Small,	*Auburn, Me.*
James Anson L. Whittier,	*Gorham, Me.*

UNDERGRADUATES.

SENIORS.

NAMES.	RESIDENCES.
Benson, Seth Henry	*Blackstone, Mass.*
Blodgett, George B.	*Rowley, Mass.*
*Davis, Frank J.	*Falmouth, Mass.*
Gowdy, Francis Marion	*Broad Brook, Conn.*
Hurlbut, Myron Robert	*Grand Isle.*
Walton, Wesley Kimball	*Auburn, Maine.*

*Partial Course.

JUNIORS.

NAMES.	RESIDENCES.
Burr, Charles Phillip	*Batesville, Ark.*
Ellis, Nathaniel W.	*Fordham, N. Y.*
Gilbert, N. Allen	*Fairfield.*
Grosvenor, Robert	*Providence, R. I.*
Hill, Howard S.	*Concord, N. H.*
Hooper, William H. jr.	*West Medford, Mass.*
Lathrop, George L.	*East Lexington, Mass.*
Morgan, Charles A.	*Albany, N. Y.*
Reed, Charles M.	*West Bridgewater, Ms.*
Stowell, Edward A.	*Boston, Mass.*
Sabine, G. K.	*Windsor.*
Sawyer, Edward W.	*Woburn, Mass.*
Wallingford, Charles R.	*Milford, N.H.*
Wentworth, William H.	*Oswego, N. Y.*
Whiting, Frank M.	*North Attleboro', Ms.*

SOPHOMORES.

NAMES.	RESIDENCES.

FRESHMEN.

NAMES.	RESIDENCES.
*Bradley, Charles O.	*Concord, N. H.*
Caldwell, James P.	*Northfield.*
Chamberlain, L. Obed	*Attleboro', Mass.*
*Cook, Albert W.	*Milford, Mass.*
†Currier, Frank	*Norwich.*
Cutter, William R.	*Boston, Mass.*
Dole, Charles,	*Northfield.*
Fox, Walter H.	*Boston, Mass.*
Hathaway, Clarence L.	*Calais,*
Hunt, William H.	*St. Albans.*
Hutchinson, John D.	*Norwich.*
†Johnston, Willie	*St. Johnsbury.*
Marble, Henry	*Dixfield, Me.*
†Pennock, Sylvester	*Norwich.*
Ransom, Eugene F.	*Norwich.*
Richards, Egbert S.	*North Attleboro', Ms*
Smith, William C.	*Portland, Me.*
*Wellman, Ernest E.	*Ionia, Mich.*

*Partial Course. †Drummers.

SUMMARY.

Seniors	6
Juniors	15
Sophomores	1
Freshmen	18
Total	40

ADMISSION.

Candidates for admission to the Freshman Class must be at least fourteen years old, and able to sustain a satisfactory examination in the Grammar of the Latin and Greek Languages, Virgil, (six Books of the Æneid,) Cæsar's Commentaries or Sallust, Homer's Iliad, (two books,) Xenophon's Anabasis, Arnold's Latin Prose Composition, (eight Chapters,) Algebra to Quadratic Equations, Arithmetic, particularly in Fractions and the Extraction of Roots.

Real equivalents will be accepted instead of the Text-Books named.

SCIENTIFIC DEPARTMENT.

Candidates for admission to the Scientific Department are required to sustain a thorough examination in English Grammar, Geography, Arithmetic, particularly in Fractions and Evolution, in Algebra to Quadratic Equations.

Candidates for examination to either Department are expected to appear for examination on Wednesday before Commencement, or to enter their names at that time, and appear for examination on Wednesday before the beginning of the Fall Term.

Candidates who are prepared to join an advanced

COURSE OF STUDY.

CLASSICAL DEPARTMENT.

FRESHMAN CLASS.

FIRST TERM.

Latin.	Horace's Odes and Epodes.
Greek.	Xenophon's Memorabilia.
Mathematics.	Geometry.
History.	Liddell's Rome.
Military.	Infantry Tactics.

SECOND TERM.

Latin.	Horace's Odes and Ep.; Livy begun.
Greek.	Homer.
Mathematics.	Geometry; Des. Geometry begun.
History.	Smith's Greece; Hume's England be-
Military.	Infantry Tactics. [gun.

THIRD TERM.

Latin.	Livy.
Greek.	Herodotus.
Mathematics.	Descriptive Geometry.
Military.	Infantry Tactics.

Arnold's Latin and Greek Prose Composition through the year.

SOPHOMORE CLASS.

FIRST TERM.

Latin.	Livy; Juvenal and Perseus.
Greek.	Herodotus; Euripides' Alcestis and
Mathematics.	Algebra. [Medœa.
Chemistry.	(Silliman's.)

SECOND TERM.

Latin. Tacitus; and Plautus' Captivi.
Greek. Æschylus or Sophocles.
Mathematics. Algebra; Trigonometry begun.
Mineralogy. (Dana's.)

THIRD TERM.

Latin. Tacitus.
Greek. Æschylus or Sophocles; and Demosthenes De Corona, or Æschines.
Mathematics. Trigonometry.
Geology. (Lyell's or Hitchcock's.)
Roman and Grecian Antiquities through the year.

JUNIOR CLASS.

FIRST TERM.

Latin. Terence.
Greek. Demosthenes DeCorona or Æschines.
Mathematics. Surveying ; Shades and Shadows; Analytical Geometry begun.
Political Philosophy. Democracy in America (De Tocqueville's,) Guizot's History of Civilization begun.
Mil. Science. Kautz's Company Clerk; Mahan's Guard and Outpost Duty.
Drawing.

SECOND TERM.

Latin. Cicero's Tusculan Questions.
Greek. Thuycidides, (Owen's.)
Mathematics. Analyt. Geom.; Diff. Calculus begun.
Political Philosophy. Guizot's; Say's or Mill's Political Economy.
Mil. Science. Guard and Outpost Duty; Mahan's Field Fortification.

THIRD TERM.

Latin. Cicero's Tusculan Questions.
Mathematics. Calculus completed.
Polit. Philos. Constitution of the United States.
Mil. Science. Artillery Tactics.
Drawing.

SENIOR CLASS.

FIRST TERM.

Nat. Philos. Mechanics.
Polit. Philos. Law of Nations, Vattel's or Wheato
Intel. Philos. (Mahan's)—Cousin's Pscycholog
Logic. (Whately's Elements.)
Mil. Science. Mahan's or Duane's Manual for I
gineer Troops.

SECOND TERM.

Nat. Philos. Acoustics and Optics; Astrono
Civil Eng. (Mahan's,) begun. [beg
Intel. Philos. Completed.
Rhetoric. (Whately's Elements.)
Mil. Science. Jomini's Art of War.
Drawing.

THIRD TERM.

Nat. Philos. Astronomy completed.
Civil Eng. Completed.
Moral Philos. (Hickock's.)
Intel. Philos. Kames' Elements.
Mil. Science. Army Regulations.

Recitations every Monday morning in Pale
Natural Theology, Butler's Analogy, or otl
books of a religious or moral character.

Themes and Declamation weekly through
the course.

French and Spanish Languages elective.

SCIENTIFIC DEPARTMENT.

FIRST YEAR—FIRST TERM

Mathematics. Algebra(Davies'Bourdon;)Geometry
History. Liddell's Rome. [Davies' Legendre.
Rhetoric. English Philology, (Fowler's.)
Mil. Science. Infantry Tactics.
Drawing.

SECOND TERM

Mathematics. Algebra, Geometry; Trigonometry and Descriptive Geometry begun.
History. Smith's Greece; Hume's England be-
Mil. Science. Infantry Tactics. [gun.
Drawing.

THIRD TERM

Mathematics. Trigonometry; Descriptive Geome-
History. Hume's England. [try.
Mil. Science. Infantry Tactics.
French.
Drawing.

SECOND YEAR—FIRST TERM

Mathematics. Surveying; Shades and Shadows.
Chemistry. (Silliman's.)
Political Philosophy. Democracy in America (De Tocqueville's,) Guizot's History of Civilization begun.
Mil. Science. Kautz's Company Clerk; Mahan's
French. [Guard and Outpost Duty.
Drawing.

SECOND TERM.

Mathematics. Analyt. Geom.; Diff. Calculus begun.
Mineralogy. (Dana's.)
Political Philosophy. Guizot's; Say's or Mill's Political Economy.
Mil. Science. Guard and Outpost Duty; Mahan's Field Fortification.

THIRD TERM.

Mathematics. Diff. and Integral Calculus (Church's.)
Geology. (Lyell's or Hitchcock's.)
Polit. Philos. Constitution of the United States.
Mil. Science. Artillery Tactics.
French.
Drawing.

THIRD YEAR.

Same as studies of the Senior Class in Classical Department, with the addition of French the first two terms.

FOURTH YEAR—FIRST TERM.

Mathematics. Higher Algebra; Descrip. Geometry.
Chemistry.
Drawing.

SECOND TERM.

Mathematics. Calculus.
Nat. Philos.
Civil Eng. (Mahan's.)
Drawing.

THIRD TERM.

Civil Engineering.
Astronomy.
Field Practice.

Recitations every Monday morning in Paley's Natural Theology, Butler's Analogy, or other books of a religious or moral character.

Themes and Declamations weekly throughout the course.

Spanish Language elective.

EXAMINATION.

The Students are publicly examined during the last week of the academic year, in all the studies of that year, which have been pursued by the class to which they belong, and their attainments marked and recorded.

EXAMINING COMMITTEE—1867.

HORACE WEBSTER, LL. D.,	New York City.
JULIUS Y. DEWEY, M. D.,	Montpelier.
REV. JOHN B. PITMAN,	Chicago, Ill.
REV. WILLIAM S. HAZEN,	Northfield.
COL. HENRY O. KENT,	Lancaster, N. H.

DEGREES.

BACHELOR OF ARTS.

The Degree of Bachelor of Arts is conferred on Students who have completed the studies of the Classical Department and have been approved, on examination at the end of the course, as candidates for the same.

CIVIL ENGINEER.

The Degree of Civil Engineer is conferred on Students who have completed the studies of the Scientific Department, and have been

BACHELOR OF SCIENCE.

The Degree of Bachelor of Science is conferred on Students who have completed the studies of the first three years of the Scientific Department, and have been approved on examination.

MASTER OF ARTS.

The Degree of Master of Arts is conferred on every Bachelor of Arts of three years' standing, or more—who, in the interval, has sustained a good moral character and who has been engaged in literary pursuits—on application to the President, one week, at least, before Commencement.

The fee, including the Diploma, is *ten dollars*, payable in advance.

MASTER OF SCIENCE.

The Degree of Master of Science is conferred, on payment of the usual fee, on such members of the Resident Graduates' Class as shall have satisfactorialy completed two years of advanced study, and on all such Graduates of the Scientific Department as shall have been diligent and successful in liberal studies and pursuits for four years after graduating.

MILITARY SCIENCE.

At Norwich University the Latin and Greek Classics are pursued to the same extent, and with the same thoroughness, as at other American Colleges of the highest standing.

The feature, however, which, more than any other, distinguishes Norwich University from other collegiate institutions, is the Department of Military Science and Tactics.

Agreeably to the provisions of its charter the Students are under military discipline—are called Cadets—dress in uniform, and are instructed, theoretically and practically, in Infantry and Artillery Tactics and Drill, Bayonet Exercise, Fortification, Reconnoissance, Castrametation, and in Guard and Out-Post duty.

The University has recently been partially reorganized by the election of Brevet-Major Thomas W. Walker, U. S. Army, (a graduate of West Point,) to its Presidency; he having been authorized to accept the same by the President of the United States, in conformity with the provisions of the Act of Congress, approved July 28th, 1866; and which Act only allows such details to be made to *twenty* colleges in the whole United States, these to be distributed, as nearly as may be, in proportion to the population of the country.

The late Rebellion has so clearly demonstrated the necessity of having our youth instructed in Military Science, in order that their services may be available to the Government on any occasion, on which it may become necessary for it to call out the Militia, to "Repel Invasion," "Suppress Insurrection," or maintain its Integrity and Honor, as not to require further illustration.

Military Discipline strengthens the body, gives to youth a vigorous constitution and manly bearing, and fits them to serve according to the

battle, but everywhere, in all employments and departments of life which demand strength, energy and endurance. Its regular and systematic training of the body, is highly conducive to perfect physical developement and the preservation of health. Thoughtful men have long since seen the necessity for training the body as well as the mind. They have long known that however strong the mind, it can do little without strength of body. The public have at length begun to see and acknowledge this truth. Gymnasia are now considered almost as needful in Institutions of learning as Philosophical apparatus. This is well, but the Gymnasium does not fully accomplish the desired object. It does not educate the bodies of *all*. The strong, vigorous, healthy youth will use the gymnasium, but those who need it most will shun it. The delicate, dyspeptic, moping, over-studious youth must be compelled to take exercise: for *him* the drill,—the regular drill under an officer,—made compulsory,—the drill is the only means as yet discovered for him.

Many friends of the University may ask: "Why was it removed from Norwich." The Trustees and Officers of it well understand the many ties that connected it with Norwich. It seemed hard to break those ties, but circumstances seemed to demand it. The reasons will be fully given to friends when requested; only one will be mentioned here. After the burning of the South Barrack on the 14th of March, 1866, efforts were made to raise funds for the rebuilding of it. The citizens of Norwich were first applied to; they did little or nothing in the matter, and persons not citizens of the place had the ready excuse, let Norwich do something first. Something had to be done immediately. The citizens of Northfield, the third or fourth town in the State in point of population, and near the capital, offered a sum of money sufficient to furnish the institution with proper buildings, provided it could be moved to that place. The proposition was fully considered by the largest meeting of the Board of Trustees which had been held for many years, when it was unanimously accepted. The academic year 1866–7 of the University was commenced in its new location, proper accomodations being furnished, in a large wooden block in the village.

Land has been purchased for University grounds, and the timber and brick necessary for a large University building have been contracted for. It is expected that a portion of the new building will be ready for use by the next winter.

The Officers of the University take this opportunity to thank its friends, particularly the Alumni and past Cadets, for their pecuniary help in carrying it on; without that help they would have failed in carrying the institution through the trying year and a half now coming to an end.—Efforts will be continued to increase its funds, and in the next catalogue a list of all donors to them, with the amount contributed, will be given.

CIRCULAR.

The attention of Churchmen is requested to the following endorsements, viz:

At a meeting of the convocation of the Protestant Episcopal Church in the Diocese of Vermont, held in Vergennes, on the 5th of December, 1866, the Bishop being in the chair, the following Resolution, introduced by the Rev. Dr. Sweet, was unanimously adopted, viz:

"RESOLVED, That we are gratified to learn, since the removal of Norwich University to its present desirable location at Northfield, that it is the purpose of the Trustees to make it more decidedly a Church Institution than ever; and that as such, we cordially commend it to the patronage and support of Churchmen generally."

Attest, G. GRAVES,
Secretary of Convocation.

The undersigned Clergymen of the Protestant Episcopal Church cordially commend the above measure, as one of great educational and religious importance.

RT. REV. MANTON EASTBURN, D. D.,
Bishop of Mass.
RT. REV. THOMAS MARCH CLARK, D. D.
Bishop of Rhode Island.
RT. REV. HENRY A. NEELY, D. D.,
Bishop of Maine.
RT. REV. GEORGE M. RANDALL, D. D.,
Bishop of Colorado.
REV. F. D. HUNTINGTON, D. D.,
Rector of the Emmanuel Church, Boston.
REV. JAMES A. BOLLES, D. D.,
Rector of the Church of the Advent, Boston.

Though endorsed as above as an Episcopal College, students of all denominations are treated with the strictest impartiality in every respect

REGULATIONS.

DISCIPLINE.—The discipline is military in form and principle. Students of all departments and classes are treated with the most scrupulous impartiality. The object is to promote study, preserve order, and improve the morals.

The immediate supervision of the discipline, and all matters pertaining to order, are under a member of the Faculty styled the Executive Officer, whose rooms are in the Quarters. Under him is a cadet, chosen for his experience and efficiency, called the Adjutant, who assists him in his duties. The Seniors and Juniors act in rotation as Officer of the Day.

The duty of the Officer of the Day is to attend to all roll-calls, mark absences and improprieties, inspect rooms and report anything that he may see amiss during his term of office.

PROHIBITIONS AND DUTIES.

1. Every Cadet is prohibited going out of the limits of the village at any time, unless with permission or on duty.

2. Gambling, or games of chance of any description, with or without cards; scuffling, and unnecessary noise, are prohibited. Every species of irregularity and immorality; in short, everything contrary to the true principles of gentlemanlike conduct and military discipline is forbidden, and will be severely punished.

3. Loitering about hotels, or stores, or any other places of public resort is strictly prohibited.

4. Every Cadet is prohibited introducing or bringing spirituous liquors of any kind into the quarters, or keeping or allowing any to be kept in his room, on pain of expulsion.

5. Every Cadet is required to attend to his duties both as to time and place, with the greatest promptitude and decision; and when on duty of any kind the strictest attention to the correct, efficient and energetic discharge of such duty is required.

7. The utmost neatness, both within, and in the vicinity of the quarters, is required.

8. Discharging fire-arms, except in regular routine of duty, or disturbing the peace in any manner whatever, is strictly prohibited.

9. Strict obedience to his superior officers is at all times required of every Cadet.

10. No Cadet is permitted to instruct while in the University, except under the direction of the Faculty.

11. Smoking tobacco is considered unbecoming a Cadet. The public practice of it is strictly prohibited.

12. Cadets are prohibited from leaving their quarters or rooms during study hours except by special permission.

PUBLIC WORSHIP.

The exercises of each day commence with prayers in the College Chapel. All Cadets are required to attend public worship on Sunday. They will attend the Episcopal Church at the morning service, unless excused to attend some other. Cadets will be excused to attend any church in the village, at the request of their parents or guardians.

VACATIONS AND FURLOUGHS.

Every Cadet is required to report himself immediately on his return, after the expiration of his Vacation or Furlough, and is from that time considered to be on duty. Absence without sufficient excuse will incur demerit marks.

As frequent absences are very injurious to the progress of students, by interrupting their studies, and the regular order of their duties, no furlough will be given to any Cadet in term time, except in cases of sickness or other urgent necessity.

DRESS.

Every Cadet is required to provide himself with the uniform dress of the University, and at all times to be neatly and appropriately dressed. After the term in which he enters, every Cadet is required to wear the uniform of the University during term time whenever he goes beyond the limits of the Quarters, unless special permission to the contrary is given.

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Every Cadet is required to appear at all dress parades as well as on guard, in complete uniform, with his clothes, arms and accoutrements in perfect order.

The Cadets, in rotation, discharge the duties of officers, non-commissioned officers, officers of the guard, and commandants of parade.

Whenever a Cadet is acting in an official capacity, he is required to discharge all his duties agreeably to the principles and practice of strict military discipline, and with the gentlemanly independence becoming a soldier.

Whenever a Cadet is in the exercise of any command, he must be treated with the most perfect respect, and implicit obedience yielded to his orders by all concerned.

MISCELLANEOUS.

Times for the commencement and continuation of study hours, for roll-calls and meals, are regulated by the Faculty.

Hours for practical scientific operations, for military exercises, and for field and other duties, are from time to time designated by the Faculty.

The students room in the University quarters, two generally occupying each room. They furnish their own rooms,—this is often done, however, by purchasing, at reduced prices, furniture from those who have no longer use for it.

EXPENSES.

Tuition per annum in University, - - - - -	$60 00
Room Rent, per annum in University, - - - - -	15 00
Light and fuel per week, about - - - - - -	75
Board per week, from - - - - - - - -	3 25 to 4 00
Washing per week, - - - - - - - - - -	50

Other incidental expenses for books, furniture, travelling expenses, societies, &c., vary according to circumstances, and the habits of the Cadets.

No deduction made in the charges when a student leaves, except in cases of sickness.

Payment of University bills is required in *advance*, at the beginning of each Term. If any student shall suffer a Term bill to remain unpaid, without an accepted excuse, beyond the middle of the term, his connection with the University shall cease.

PRIZES, 1866.

The following prizes were publicly awarded on Commencement day, August 2, 1866:

Two Prizes to the two best drilled Cadets in the Infantry Manual of Arms.

First Prize—SETH H. BROWN, Blackstone, Mass.

Second Prize—G. K. SABINE, Windsor.

CALENDAR, 1867.

May 2.	Thursday, Summer Term begins at 7 P. M.
July 25.	Thursday, Annual Examinations begins.
July 28.	Sunday, Baccalaureate Sermon.
July 31.	Wednesday, Examinations for admission to College.
July 31.	Wednesday, Annual Meeting of the Alumni.
Aug. 1.	Thursday, Commencement.
	VACATION FOUR WEEKS.
Aug. 28.	Wednesday, Examination for admission to College.
Aug. 29.	Thursday, Fall Term begins at 7 P. M.
Dec. 19.	Thursday, Fall Term ends.
	CHRISTMAS VACATION TWO WEEKS.

1868.

Jan. 2.	Thursday, Winter Term begins at 7 P. M.
April 23.	Thursday, Winter Term ends.
	VACATION ONE WEEK.
April 30.	Thursday, Spring Term begins at 7 P. M.
June 18.	Thursday, Annual Examinations begin.
June 21.	Sunday, Baccalaureate Sermon.
June 24.	Wednesday, Examinations for admission to College.
June 24.	Wednesday, Annual Meeting of the Alumni.
June 25.	Thursday, Commencement.
	VACATION NINE WEEKS.

☞NOTE.—Commencing with the academic year 1867–68, Commencement will come on the last Thursday in June, thus giving nine weeks for the summer vacation. Under this arrangement the summer

CATALOGUE

OF THE

OFFICERS AND CADETS

OF

NORWICH UNIVERSITY,

A MILITARY COLLEGE, FOUNDED 1834.

1870-71.



MONTPELIER, VT.:
Printed at the Argus and Patriot Printing House.
1871.



CATALOGUE

OF THE

OFFICERS AND CADETS

OF

NORWICH UNIVERSITY,

NORTHFIELD, VT.,

FOR THE ACADEMIC YEAR

1870-71.

NORTHFIELD, VT.:
PRINTED FOR THE UNIVERSITY
JULY 1871.



BOARD OF TRUSTEES.

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The Rev. JOSIAH SWETT, D. D., Secretary.
Hon. GEORGE NICHOLS, Treasurer.

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Hon. CHARLES DEWEY, Montpelier.

MILITARY DEPARTMENT.

Capt. CHARLES A. CURTIS, U. S. A.
Commandant of Cadets.

Capt. EPHRAIM WILLIAMS, U. S. A.,
Inspector and Quartermaster.

Lieut. CHARLES DOLE, V. V. M.,
Commissary and Steward.

CADET OFFICERS.

Cadet-Capt. WM. G. OWEN, Inspector of Quarters.
Cadet-Lieut. C. G. GRIFFITH, Adjutant, Christmas Term.
Cadet-Lieut. F. Z. KIMBALL, Adjutant, Easter Term.
Cadet-Lieut. S. D. CONANT, In Charge of Music.
Cadet-Serg't. S. H. CAMPBELL, Officer of 2d Passage.
Cadet-Corp'l. W. L. STEDMAN, Officer of 1st Passage.
JAMES EVANS, Janitor and Armorer.

ABBREVIATIONS.

Cl. - - - - - - -	Classical Course.
L. S. - - - - - -	Latin Scientific Course.
E. S. - - -	English Scientific Course.
P. - - - - - - -	Partial Course.

CADETS.

Seniors.

Names.	Residences.	Depar't.
›wn, Eugene Vose,	*Woonsocket, R. I.,*	E. S.
ıpbell, Charles Powhatan,	*Fredericksburg, Va.,*	Cl.
en, William Griffith,	*Northfield,*	L. S.
tt, Adrian,	*Blackstone, Mass.,*	Cl.

Juniors.

Name.	Residence.	Depar't.
ıpbell, Stephen Henderson,	*Woodstock,*	E. S.
ıent, Waldo Park,	*Rutland,*	P.
ant, Samuel Dimick,	*Thetford,*	E. S.
fith, Charles Greenleaf,	*Brooklyn, N. Y.,*	E. S.
ıball, Francis Zeno,	*Northfield,*	E. S.
lman, William Lemuel,	*Lawrence, Mass.,*	E. S.
el, George,	*Brooklyn, N. Y.,*	E. S.
ett, James Wheeler,	*Fairfax,*	Cl.

Sophomores.

Name.	Residence.	Depar't
Aldrich, George Jerome,	*St. Albans*,	E. S
Bailey, Alvin Morton,	*St. Albans*,	E. S
Bates, Frank Richard,	*Northfield*,	E. S
Belknap, Simeon Edson,	*Northfield*,	E. S
Bennett, Frank Foster,	*Northfield*,	E. S
Best, William Herbert,	*Northfield*.	E. S
Burt, Henry Augustus,	*Swanton*,	L. S
Clark, Guy Meigs,	*Malone, N. Y.*,	E. S
Daniell, Harry Warren,	*Boston, Mass.*,	E. S
Davis, William Alanson Dyer,	*Rutland*,	E. S
Dorr, William Ripley,	*Centre Rutland*.	E. S
Eastman, Paris Augustus.	*Rutland*,	E. S
Ely, Frederick Leverett,	*St. Johnsbury*,	E. S
Gregg, Fred. Wallace,	*Northfield*,	L. S
Huntoon, George Lemuel,	*Lawrence, Mass.*,	E. S
Jewett, Charles Sidney,	*Boston, Mass.*,	L. S
Johnston, Cyrus Moses.	*Northfield*,	L. S
Kimball, Edson,	*Northfield*,	E. S
Lyman, Harry Tudor,	*West Randolph*,	E. S
Metcalf, George Wallace.	*Northfield*,	L. S
Moore, John Robert,	*Elizabeth, N. J.*,	L. S
Newton, Benjamin Ball, Jr.	*Brooklyn, N. Y.*,	L. S
Pierce, Edwin Forrester.	*Greenfield, Mass.*,	E. S
Proctor, George Warren.	*Franklin, N. H.*,	E. S
Royce, Ira Hayden,	*St. Albans*.	E. S
Saxe, James Franklin,	*St. Albans*,	E. S
Sheldon, Archie Lorenzo,	*Rutland*,	E. S
Silver, Robert Alexander.	*Northfield*.	L. S
Smith, Edward Taylor,	*St. Albans*,	L. S
Taylor, D'Orsey,	*St. Albans*,	L. S
Williams, Charles Kilborn,	*Rutland*,	P

Freshmen.

Name.	Residence.	Depar't.
Adams, Solon,	*Swanton*,	E. S.
Field, Charles Edward,	*Greenfield, Mass.*,	E. S.
Gregg, Charles Alexander,	*Northfield*,	E. S.
Hadley, George Wells,	*Northfield*,	E. S.
Johnson, Willard Clifton,	*Northfield*,	E. S.
Miller, Henry Marshall,	*Northfield*,	E. S.
Pitman, Edward Pancost,	*Swanton*,	E. S.
Reed, Frank Henry,	*Greenfield, Mass.*,	E. S.
Richardson, Charles Harris,	*Northfield*,	E. S.
Spear, George John,	*Northfield*,	E. S.
Stearns, John Kerswell,	*Woodstock*,	E. S.

SUMMARY.

Seniors, - - - - - - - - -	4
Juniors, - - - - - - - - -	8
Sophomores, - - - - - - - -	31
Freshmen, - - - - - - - -	11
Total,	54

SCIENTIFIC DEPARTMENT.

ADMISSION.

Candidates will be received at any time, and in any class for which they are fitted. For the Freshman Year no particular examination is required, but all are expected to present a certificate of good moral character. For admission to the Sophomore Year of the SCIENTIFIC COURSE, the candidates are required to pass a satisfactory examination in English Grammar, Geography, Arithmetic, Algebra to Quadratic Equations, and through two books of Geometry.

COURSE OF STUDY.

FRESHMAN YEAR.

CHRISTMAS TERM.

MATHEMATICS.	Higher Arithmetic begun.
ANALYSIS.	Analysis of the English Language.
GEOGRAPHY.	Guyot's Physical Geography.
MILITARY SCIENCE.	Infantry Drill.
LITERARY EXERCISES.	Themes and Declamations every Saturday evening.

EASTER TERM.

MATHEMATICS.	Arithmetic finished; Algebra continued; Geometry begun.
RHETORIC.	Quackenbos' Rhetoric.
LATIN.	Harkness' Latin Grammar and Reader.
HISTORY.	United States History.
MILITARY SCIENCE.	Infantry Drill.

LITERARY EXERCISES.	Themes and Decl day evening.

SOPHOMORE YE

CHRISTMAS TERM.

MATHEMATICS.	Algebra (Davies' (Davies' Legen
LATIN.	Sallust, or Cæsar.
HISTORY.	Smith's Greece.
MILITARY SCIENCE.	Infantry Drill; Subjects.
LITERARY EXERCISES.	Themes and Decl day evening.

EASTER TERM.

MATHEMATICS.	Algebra, Geometr Descriptive Ge
HISTORY.	Liddell's Rome, I
LATIN.	Virgil.
MILITARY SCIENCE.	Infantry Drill; L
DRAWING.	Linear and Persp
LITERARY EXERCISES.	Themes and Dec day evening.

JUNIOR YEAI

CHRISTMAS TERM.

MATHEMATICS.	Surveying; Shad
CHEMISTRY.	Silliman's.
POLITICAL PHILOSOPHY.	Democracy of A ville's); Guizot' tion.

LATIN.	Cicero.
MILITARY SCIENCE.	Guard and Outpost Duty; Castrametation; Lectures.
DRAWING.	Architectural.
LITERARY EXERCISES.	Themes and Declamations every Saturday evening.

EASTER TERM.

MATHEMATICS.	Analytical Geometry; Differential and Integral Calculus (Church's).
NATURAL SCIENCE.	Dana's Mineralogy; Hitchcock's Geology.
POLITICAL PHILOSOPHY.	Political Economy; Constitution of the United States.
MODERN LANGUAGES.	French, or German.
MILITARY SCIENCE.	Mahan's Field Fortification; Artillery Drill.
DRAWING.	Topographical.

SENIOR YEAR.

Same as studies of the Senior Class in Classical Department, with the addition of French or German.

SOPHOMORE YEAR.

CHRISTMAS TERM.

LATIN.	Livy; Juvenal and Persius.
GREEK.	Herodotus; Euripides' Alcestis and Medœa.
MATHEMATICS.	Algebra (Davies' Bourdon).
CHEMISTRY.	Silliman's.
MILITARY SCIENCE.	Infantry Drill; Lectures on Military Subjects.
LITERARY EXERCISES.	Themes and Declamations every Saturday evening.

EASTER TERM.

LATIN.	Plautus' Captivi; Tacitus.
GREEK.	Æschylus, or Sophocles; Demosthenes DeCorona, or Æschines.
MATHEMATICS.	Algebra; Trigonometry.
NATURAL SCIENCE.	Dana's Mineralogy; Hitchcock's Geology.
MILITARY SCIENCE.	Infantry Drill; Lectures.
LITERARY EXERCISES.	Themes and Declamations every Saturday evening; Roman and Grecian Antiquities through the year.

JUNIOR YEAR.

CHRISTMAS TERM.

LATIN.	Terence.
GREEK.	Demosthenes De Corona, or Æschines.
MATHEMATICS.	Surveying; Shades and Shadows; Analytical Geometry begun.
POLITICAL PHILOSOPHY.	Democracy in America (De Tocqueville's); Guizot's History of Civilization begun.
MILITARY SCIENCE.	Guard and Outpost Duty; Castrametation; Lectures.
LITERARY EXERCISES.	Themes and Declamations every Saturday evening.

LATIN.
GREEK.
MATHEMATICS.

POLITICAL PHILOSOPHY.

MILITARY SCIENCE.

LITERATY EXERCISES.

SE

NATURAL PHILOSOPHY.
POLITICAL PHILOSOPHY.
INTELL'TAL PHILOSOPHY
LOGIC.
MILITARY SCIENCE.
MODERN LANGUAGES.
LITERARY EXERCISES.

NATURAL PHILOSOPHY.
CIVIL ENGINEERING.
INTELL'TAL PHILOSOPHY
MORAL PHILOSOPHY.
RHETORIC.
MODERN LANGUAGES.
MILITARY SCIENCE.

Recitations every Mo
ogy, Butler's Analogy,
character.

Spanish Language ele

[redacted]

PARTIAL COURSE.

Those Cadets who desire it may pursue a PARTIAL COURSE, choosing their own subjects of study. Upon completing this Course, a Certificate of the Cadet's actual attainments is given.

Cadets may pursue any of the studies of any other Department than that to which they properly belong, if they have the time.

DEGREES, etc.

The Degree of BACHELOR OF SCIENCE is given to Cadets completing the Scientific Course, and BACHELOR OF ARTS to those completing the Classical Course.

The Degree of CIVIL ENGINEER is conferred on every Bachelor of Science of three years' standing, or more—who, in the interval, has sustained a good moral character, and who has been engaged in Scientific pursuits—on application to the President, one week, at least, before Commencement. The fee, including the Diploma, is TEN DOLLARS, payable in advance.

The Degree of MASTER OF ARTS is conferred, on payment of the above fee, on all Bachelors of Arts who have, for three years after graduating, been engaged in Literary pursuits, and sustained a good moral character.

Degrees Conferred since 1860.

1860.

Name.	Residence.	Degree.
Bascom, Gustavus M.,	*Columbus, Ohio,*	B. S.
Field, George W.,	*Northfield, Mass.,*	B. S.
Morton, Charles,	*Boston, Mass.,*	B. S.
Shattuck, Samuel Walker,	*Groton, Mass.,*	B. S.
Smith, Timothy Sumner,	*Claremont, N. H.,*	B. S.

*1861.

Curtis, Charles Albert,	*Hallowell, Maine,*	A. B.
Stoughton, Charles Bradley,	*Bellows Falls,*	B. S.

*1862.

Kellogg, Theodore Harvey,	*Hillsborough, Ohio,*	A. B.

Honorary Degrees.

Rev. James H. Eames,	*Concord, N. H.,*	D. D.
General Alonzo Jackman,	*Norwich,*	LL. D.

1863.

Alvord, Henry Elijah,	*Greenfield, Mass.,*	B. S.
Atwood, Charles Henry,	*St. Albans,*	B. S.
Bailey, George Alonzo,	*Woodstock,*	B. S.
Converse, George Albert,	*Norwich,*	A. B.
Barrett, Curtis Sawyer,	*South Strafford,*	B. S.
Dewey, William Strong,	*Queechy,*	B. S.
Haven, William,	*Portsmouth,*	B. S.
Moses, Rufus Leander,	*Montpelier,*	B. S.
Ober, George Hawes,	*Fayetteville,*	B. S.
Patterson, Rody, Jr.,	*Pittsburgh, Pa.,*	B. S.
Rich, Clayton Eugene,	*Shoreham,*	B. S.
Steele, Charles Edward,	*Windsor,*	B. S.

1864.

Adams, Edward Dean,	*Boston, Mass.,*	B. S.
Bascom, Warren Franklin,	*Whitehall, N. Y.,*	B. S.
Gerrish, William,	*Chelsea, Mass.,*	B. S.
Gregory, Charles Dan,	*Waterford,*	B. S.
Kent, Charles Nelson,	*Lancaster, N. H.,*	B. S.
Lasier, Thomas Jefferson,	*Freeport, Ill,*	B. S.

* NOTE.—These Classes were broken up by the war. All held commissions, and but three returned to ask Degrees.

Lord, Robert Chandler,	*Boston, Mass.*,	B. S.
McCulloch, Fred. Halsey,	*Fort Wayne, Ind.*,	B. S.
Metcalf, Ralph,	*Claremont, N. H.*,	B. S.
Osgood, John Holbrook,	*Strafford*,	B. S.
Phelps, Dudley Farley,	*Pomfret, Conn.*,	B. S.
Sawyer, Francis Asbury,	*Boston, Mass.*,	B. S.
Shattuck, Abbott Allen,	*Dover, N. H.*,	B. S.
Thorndike, Charles Francis,	*Groton, Mass.*,	B. S.
Tillinghast, Charles Foster,	*Pittsburgh, Pa.*,	B. S.

Honorary Degrees.

Rev. Josiah Swett,	*Fairfax*,	D. D.
Rev. Frederick W. Shelton,	*Montpelier*,	LL. D.

1865.

Bottomly, Frank Timothy,	*Cherry Valley*,	B. S.
Boyd, John Curry,	*Boston, Mass.*,	B. S.
Child, Oscar Barron,	*West Randolph*,	B. S.
Dewey, John Jasper,	*Queechy*,	B. S.
Howard, Henry Augustus,	*Windsor*,	B. S.
Howard, William Woodbury,	*Hallowell, Maine*,	B. S.
Richards, Joseph Swift,	*Geneva, N. Y.*,	B. S.
Smart, Charles Henry,	*Lowell, Mass.*,	B. S.

Honorary Degrees.

Edward Bancroft Williston,	*Lieut. U. S. Artillery.*	B.S.
J. Wolcott Phelps,	*Brattleboro*,	LL. D.
Alfred S. Barry,	*Boston, Mass.*,	D. D.
George W. Ballock,	*Washington, D. C.*,	A. M.

1866.

Needham, William C. H.,	*Groton, Mass.*,	B. S.
Reed, Charles Henry,	*Bridgewater, Mass.*,	B. S.

Small, Ruel,	*Auburn, Maine,*	B. S.
Whittier, James Anson L.,	*Gorham, Maine,*	B. S.
	Honorary Degrees.	
Rev. Samuel Bronton Shaw,	*Rhode Island,*	D. D.
T. S. Drowne,	*New York City,*	D. D.
Joseph Stedman,	*Jamaica Plain.*	A. M.
	1867.	
Benson, Seth Henry,	*Blackstone, Mass.,*	B. S.
Gowdy, Francis Marion,	*Broad Brook, Conn.,*	B. S.
Hurlburt, Myron Robert,	*Grand Isle,*	B. S.
Walton, Wesley Kimball,	*Auburn, Maine,*	B. S.
	Honorary Degrees.	
Samuel Walker Shattuck,	*Groton, Mass.,*	A. M.
Hiram Adolphus Cutting,	*Lunenburg,*	A. M.
Stoddard B. Colby,	*Washington, D. C.,*	LL. D.
I. T. Hartley,	" "	LL. D.
John Hamilton Graham,		LL. D.
	1868.	
Ellis, Nathaniel W.,	*Fordham, N. Y.,*	B. S.
Grosvenor, Robert,	*Providence, R. I.,*	B. S.
Sabine, George N.,	*Windsor,*	B. S.
Wallingford, Charles R.,	*Milford, N. H.,*	B. S.
Whiting, Frank M.,	*North Attleboro', Mass.,*	B. S.
	1869.	
Dole, Charles,	*Northfield,*	B. S.
Hathaway, Clarence Lockwood,	*Marshfield,*	B. S.
Howe, Henry John Skinner,	*Northfield,*	B. S.
	1870.	
Davis, Job Franklin,	*Falmouth, Mass.,*	B. S.
Dole, Walter,	*Northfield,*	B. S.
Gilbert, Alfred Briggs,	*Lanesboro', Mass.,*	B. S.
Tarbell, Charles Gilman,	*Pleasantville, Pa.,*	B. S.
Willard, George Morrison,	*North Hartland,*	B. S.

GENERAL REMARKS.

NORWICH UNIVERSITY is located in a quiet village at Northfield, Vermont, where there are comparatively few temptations to idleness and dissipation. The situation is pleasant, healthful, and easy of access by means of the Vermont Central Railroad.

There are Two Departments in this Institution:

The Scientific and the Classical.

In the SCIENTIFIC DEPARTMENT, a thorough practical scientific education may be obtained. This is the feature which, together with the military drill and instruction, has mainly distinguished the College ever since its foundation.

In the CLASSICAL DEPARTMENT, the Course of Study is as extended as in most American Colleges.

The Course of Study in the Scientific Department has been enlarged by *prefixing* one year, making it four years instead of three, so that pupils well trained in the Common Schools can now be admitted to this Department. This will open the UNIVERSITY to a larger number of Students, and will make the Course more complete and thorough.

Those who desire it may pursue a PARTIAL COURSE, choosing their own studies, and reciting in existing classes.

The Students are called Cadets, and are under military discipline. They dress in uniform, and are instructed theoretically and practically in Infantry and Artillery Tactics and Drill, Bayonet Exercise, Fortification, Reconnoisance, and Castrametation, and in Guard and Outpost duty.

The MILITARY DEPARTMENT is under the charge of the PROFESSOR OF MILITARY SCIENCE, an OFFICER of the U. S. REGULAR ARMY, appointed by the SECRETARY OF WAR, who rooms at the UNIVERSITY, and has a constant supervision of the Cadets.

The military drill and exercises contribute greatly to health, strength, and the best physical development; and at the same time to a dignified and easy manner, a courteous and manly bearing. The system of military discipline, though seemingly rigorous and

exacting, is nevertheless intended to be just and reasonable, and is specially designed to form habits of order, neatness, promptness, and regularity—*habits* so essential to the best and truest success in life.

In a few words, the whole training of the Institution, physical, intellectual, and moral, has for its object what should be the object of every enlightened system of education, viz: A SOUND MIND IN A SOUND BODY.

ARMS AND EQUIPMENTS.

The U. S. Ordnance Department, during the last year, furnished the UNIVERSITY with $4,500,00 worth of Arms and Equipments of the most modern construction. The Armory, therefore, contains at present:

150 Breech loading Rifles,	Cadet size.
150 Sets Equipments,	" "
30 Light Artillery Sabres,	" "
6 Sets Signal Equipments.	
1 Section Artillery, &c., &c.	

ABSTRACT OF THE RULES AND REGULATIONS.

DISCIPLINE.—The discipline is military in form and principle. The object is to promote study, preserve order, and improve the morals.

The immediate supervision of the discipline, and all matters pertaining to order, are under a member of the Faculty styled the Executive Officer, whose rooms are in the Quarters. Under him is a Cadet, chosen for his experience and efficiency, called the Adjutant, who assists him in his duties. The Commissioned and Non-Commissioned Officers are appointed from the Senior Class in the order of merit, and for soldierly bearing. The Seniors and Juniors act in rotation as Officers of the Day. The duty of the Officer of the Day is to attend to all roll-calls, mark absences and improprieties, inspect rooms, and report anything that he may see amiss during his term of office.

VACATIONS AND FURLOUGHS.

Every Cadet is required to report himself immediately on his return, after the expiration of his Vacation or Furlough, and is from that time considered to be on duty. Absence without sufficient excuse will incur demerit marks.

PROHIBITIONS AND DUTIES.

1. Every Cadet is prohibited going out of the limits of the village at any time, unless with permission or on duty.

2. Gambling, or games of chance of any description, with or without cards; scuffling, and unnecessary noise, are prohibited. Every species of irregularity and immorality—in short, everything contrary to the true principles of gentlemanlike conduct and military discipline is forbidden, and will be severely punished.

3. Loitering about hotels, or stores, or any other places of public resort, is strictly prohibited.

4. Every Cadet is prohibited introducing or bringing spirituous liquors of any kind into the quarters, except on the prescription of a physician, or keeping or allowing any to be kept in his room, on pain of expulsion.

5. Every Cadet is required to attend to his duties both as to time and place, with the greatest promptitude and decision; and, when on duty of any kind the strictest attention to the correct, efficient, and energetic discharge of such duty is required.

6. Each Cadet is required to make good all damages done to his arms and accoutrements, instruments, and quarters, or their appurtenances.

7. The utmost neatness, both within and in the vicinity of the quarters, is required.

8. Discharging fire-arms, except in regular routine of duty, or disturbing the peace in any manner whatever, is strictly prohibited.

9. Strict obedience to his superior officers is at all times required of every Cadet.

10. No Cadet is permitted to instruct while in the UNIVERSITY, except under the direction of the Faculty.

11. Smoking tobacco in public is strictly prohibited.

12. Cadets are prohibited from leaving their quarters or rooms during study hours, except by special permission.

PUBLIC WORSHIP.

The exercises of each day commence with prayers in the College Chapel. All Cadets are required to attend public worship on Sunday morning. They will attend the Episcopal Church at the morning service, unless excused to attend some other.

Cadets will be excused to attend any church in the village, at the written request of their parents or guardians.

As frequent absences are very injurious to the progress of students, by interrupting their studies, and the regular order of their duties, no furlough will be given to any Cadet in term time, except in cases of sickness or other urgent necessity.

DRESS.

Every Cadet is required to provide himself with the uniform dress of the University, and at all times to be neatly and appropriately dressed. Every Cadet is required to wear the uniform of the UNIVERSITY during term time, unless special permission to the contrary is given.

As little citizen clothing should be brought to the UNIVERSITY as possible. Uniform pantaloons made at home must, like those made at the UNIVERSITY, be without side pockets.

MILITARY DUTIES AND INSTRUCTION.

Every Cadet is required to appear at all dress parades, as well as on guard, in complete uniform, with his clothes, arms and accoutrements in perfect order.

Whenever a Cadet is acting in an official capacity, he is required to discharge all his duties agreeably to the principles and practice of strict military discipline, and with the gentlemanly independence becoming a soldier.

Whenever a Cadet is in the exercise of any command, he must be treated with the most perfect respect, and implicit obedience yielded to his orders by all concerned.

MISCELLANEOUS.

Times for the commencement and continuation of study hours, for roll-calls and meals, are regulated by the Faculty.

Hours for practical scientific operations, for military exercise, and for field and other duties, are, from time to time, designated by the Faculty.

EXPENSES.

Aside from Clothes, Books, etc., the whole charge for Board, Washing, Fuel, Lights, Tuition and Room Rent, including Stove and Bedstead, per annum, is $350.00.

One half of the amount for each Term is to be paid at the beginning, and the remaining half at the middle of the Term.

Cadets who act as Musicians will have $125.00 remitted.

CALENDAR, 1871-2.

There are Two Terms in the Academical Year:

CHRISTMAS AND EASTER,

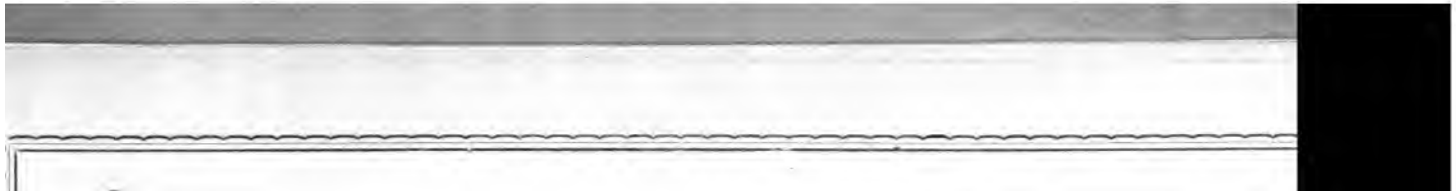
One of Sixteen Weeks, and the other of Twenty-Four Weeks.

CHRISTMAS TERM begins Thursday, August 31st, at 7 o'clock, P. M., and ends Thursday, December 21st, and is followed by a vacation of five weeks.

EASTER TERM begins Thursday, January 25th, 1872, at 7 o'clock, P. M., and ends at the Annual Commencement, Thursday, July 12th, 1872.

ANNUAL ENCAMPMENT at BERLIN POND Wednesday, June 6th, 1872, continuing two weeks.





TO THE PUBLIC.

NORWICH UNIVERSITY is situated about ten miles South of Montpelier, i quiet and attractive village of Northfield, Vermont, where comparatively few tem tions invite to idleness and dissipation. The position is pleasant, easy of acces means of the Vermont Central Railroad, and very healthy, even for healthy Verm

THIS UNIVERSITY, by her works for nearly *forty* years past, and more latel her extraordinary contribution of educated Officers during the War, has earn title to the generous confidence of the public.

The Course of Instruction

Embraces the usual studies of a liberal education, while her Charter makes Civi gineering and Military Science a distinguishing feature.

HER SYSTEM OF MILITARY DISCIPLINE is specially designed to form habi responsibility, promptness, subordination, and order.

THE DRILLS AND EXERCISES form a superb Gymnasium, and contribute gr to health, strength, and the best physical development ; to a self-possessed and manner, and a courteous and manly bearing.

THE DAILY ROUTINE, with its regular morning and evening hours, its Drum I and Bugle Calls, Reveille, Retreat, Tattoo and Taps ; with its orderly march to Ec tions and Meals, its Drills, its Roll Calls, its Reports; with its uniform dress, e lished discipline, impartial government, and punctilious regard to respectful dep ment and self-control in all Official relations; strongly encourages the formatio regular habits and scrupulous attention to duties. It cherishes a sense of honor responsibility in the discharge of trusts ; and, as experience uniformly shows, h most wholesome influence upon health and morals.

The whole training, physical, intellectual and moral, has for its object to dev a sound mind in a sound body, and to educate our youth to be active, healthy, g and useful citizens in this great Republic.

To all those who desire for their sons a right training of the head and heart, desire also to unite with it the Physical and Moral benefits of a THOROUGH MILIT EDUCATION, DISCIPLINE, and DRILL, under the most favorable circumstances, with surroundings of the most wholesome influence, NORWICH UNIVERSITY sents her claims.

The Military Department.

The Students are called Cadets, and are under Military Discipline. The Mili Department is under the charge of the Professor of Military Science, an Officer of U. S. Regular Army, appointed by the Secretary of War. This officer is the C mandant of the Corps of Cadets, and is responsible for their Military Discipline training. Under him is a Cadet, chosen for his experience and efficiency, called Adjutant, who assists him in his duties. The Commissioned and Non-Commissio Officers are appointed from the Senior Class, in the order of merit, and for soldi bearing. The Seniors and Juniors act in rotation as Officers of the Day. Every C is required to wear the uniform of the University during term time, unless spe permission to the contrary is given. The Cadets are instructed theoretically practically in Infantry and Artillery Tactics and Drill, Bayonet and Sword Exer Fortification, Reconnoissance, Castrametation, and in Guard and Outpost Duty. University has been furnished by the U. S. Ordnance Department with arms equipments of the most modern construction.

The Corps of Cadets furnishes one company of Infantry to the Regiment of mont Militia, and the one section of Artillery now recognized in the State. En ment in these is strongly recommended. The Professor of Military Science is m by law their commander, and the University is pledged for their right discipline good behavior.

The Scientific and Classical Departments.

ıe Degree of Bachelor of Science is given to Cadets completing the Scientific **ırse, and Bachelor of Arts** to those completing the Classical Course. **Bachelors Science,** of three years' standing, may, if duly qualified, and upon payment of **e usual** fee for Diploma, be advanced to the Degree of **Civil Engineer**; and in like **anner Bachelors of Arts** may be advanced to the Degree of **Master of Arts.**

A Gold Medal is offered for the competition of the Seniors, and a Silver Medal for **e Juniors,** to be awarded at the next Commencement, if the appointed conditions **e fulfilled.**

On Monday morning the Classes in rotation attend the instructions of the President; **ız:** the Freshmen, Old Testament History; the Sophomores, New Testament **istory**; the Juniors in Natural Theology, and the Seniors in Christian Evidences.

Course of Scientific and Military Study.*

The following Course contemplates three Recitations daily, together with the Mili**ry Instruction** and Drill, and the Course in Drawing.

Candidates for the Freshman Class must be able to stand a satisfactory Examination **ı Common** Arithmetic, English Grammar Reading, Writing, and Spelling; in **lgebra** through Equations of the Second Degree, and in the History of the United **tates.**

FRESHMAN CLASS.

HORT TERM.—1 Algebra; 2. Study of Words (Trench); 3. English Composition; 4. Declamations; 5. INFANTRY DRILL.

ONG TERM.—1. Geometry; 2. "English Past and Present," "Glossary of English Words," Synonyms.

3. History of England; 4. Composition, Declamations; 5. INFANTRY DRILL, SWORD AND BAYONET EXERCISE.

SOPHOMORE CLASS.

HORT TERM.—1. Preliminary Exercises in Algebra and Geometry, Plane Trigonometry, Mensuration, Surveying, Navigation; 2. History of Rome; 3. Vegetable and Animal Physiology. Zoology; 4. Themes and Declamations; 5. INFANTRY DRILL, LECTURES ON THE CUSTOMS OF THE SERVICE.

ONG TERM.—1. Analytical Geometry, Differential and Integral Calculus; 2. History of Greece; 3. Zoology, Philosophy of Natural History; 4. Descriptive Geometry, Shades and Shadows, Drawing—Linear and Perspective; 5. Themes and Declamations; 6. INFANTRY DRILL, TACTICAL USE OF THE THREE ARMS, LECTURES, SWORD AND BAYONET EXERCISE.

JUNIOR CLASS.

HORT TERM.—1. Chemistry; 2. Logic; 3. English Literature; 4. Vocal Culture, Themes, Declamations, and Debates; 5. Drawing—Mechanical; 6. INFANTRY DRILL, GUARD AND OUTPOST DUTY, CASTRAMETATION, LECTURES; 7. French and Spanish (voluntary).

ONG TERM.—1. Natural Philosophy, Mechanics; 2. Rhetoric; 3. Ethics—Elements of Morality; 4. English Literature, Rhetorical Exercises, Themes, Original and Selected Declamations, Debates; 5. Drawing—Topographical; 6. INFANTRY DRILL, SPECIAL OPERATIONS OF WAR, ARTILLERY DRILL. SWORD AND BAYONET EXERCISE; 7. French and Spanish (voluntary).

*NOTE.—Students in this Course are strongly recommended to take also a moderate **ırse** in Latin.

SENIOR CLASS.

SHORT TERM.—1. Acoustics, Optics, Astronomy; Civil Engineering, and P
Practice; 2. Butler's Analogy: 3. Political Economy, International Law
General Literature, Original Declamations; Debates, and Essays; 5. Drawi
Engineering; 6. ARTILLERY DRILL, SIGNALS, FENCING; 7. French and Spa
(voluntary).

LONG TERM.—1. Geology, Mineralogy; 2. Hamilton's Metaphysics (Bowen's
3. History of Philosophy; 4. Critical Studies in English Literature, Rheto
Exercises, Vocal Culture; 5. Drawing—Architectural; 6. MANUAL FOR
GINEER TROOPS, ART OF WAR, FENCING, BAYONET AND SWORD EXERCI

Classical Department.

The usual Collegiate requirements for admission to the Freshman class will b
pected in this Department. Provision is made in the Preparatory Department for
mentary instruction in Latin and Greek, with a view to entering the *Freshman* ye

FRESHMEN. LATIN—Horace, Odes and Epodes; Livy; Exercises. GREEK—X
phon (Memorabilia); The Iliad. Mathematics, History, Rhetorical Ex
ses, and Military Instruction, as in the Freshman year of the Scientific cour

SOPHOMORES. LATIN—Horace, Satires and Epistles; Cicero de Senectute; Exerc
GREEK—The Odyssey; Herodotus; Sophocles; The Electra. Mathema
History, Rhetorical Exercises and Military Instruction, as in the Sophomore
of the Scientific Course. Drawing (voluntary).

JUNIORS. LATIN—Tacitus; Cicero, de Officiis; Terence GREEK—Demosthe
Æschylus; Euripides; Thucydides. Chemistry, Nat. Phil., Logic, Rhetoric, Li
and Military Instruction, as in the Junior year of the Scientific Course. Dr
ing (voluntary.)

SENIORS. LATIN (Elective). GREEK (Elective). In other respects this yea
identical with the Senior year of the Scientific course.

Preparatory Department.

Principal, Prof. CHARLES DOLE, A. M.

This Department is now prepared to receive Scholars. It has been recently
ganized to meet the needs of that class of Students who are not quite prepare
enter the higher Departments, or whose parents desire for them an accurate trai
in the fundamentals of a good Education for practical business. As its Scho
belong to the Corps of Cadets they will be subject to the general regulations o
sight and administration of the Corps. And as they will pursue a separate Dep
ment of Study, they will be controlled also by the special regulations of that Dep
ment. They will be received at not less than thirteen years of age. They will re
in a distinct portion of the building, under charge of an Instructor. Their expe
may be controlled by the Principal who will, if desired, receive and account
money intended for their benefit. The Instruction and Discipline of this Dep
ment can be relied on as thorough, kind, and firm.

Miscellaneous.

ADMISSION, &c. All Candidates for Admission will report promptly to
President. They will furnish a Certificate of good moral Character; and will s
the Rules and Regulations of the University.



Expenses.

The charge in gross for Tuition, Board, Washing, Fuel, Lights, Room, Stove, Bed stead, and use of Arms and Equipments, is $350 per annum. "Washing" means 1 1-2 dozen per week ; extra washing, 50 cents per dozen.

Bills payable strictly in advance, one-half at the beginning, the other half at the middle, of the Term. Cadets who are appointed as Musicians will have $125 remitted. Expenses caused by wanton injury will be divided among the bills, if the perpetrators thereof cannot be ascertained. No degrees or honorable discharge can be conferred upon any Student who does not exhibit to the President the certificate of the Treasurer, that the University bills are all paid, or satisfactorily arranged for.

At the pleasure of any Parent or Guardian, a sum of money may be deposited with the Commandant, together with instructions as to its disbursement, in order that the Bills of the Student may be audited, and extravagant expenses discouraged. As the prescribed Uniform worn by the Cadets may be made in Northfield, it is only necessary to bring a full supply of underclothing, with shoes, towels, and bedding.

Should any deserving persons of straitened means, seeking an Education, desire information as to special terms at reduced rates, they are referred to Prof Charles Dole, Acting Treasurer.

Students may enter at any time of the Collegiate year; and in such cases the Acting Treasurer will make a just allowance in the half-term bill.

Uniform.

A double-breasted Frock Coat of dark blue cloth; University buttons. Trousers, dark blue, with light blue welt. Black Cravat. U. S. Shako with usual gilt ornaments, black pompon; Forage Cap. Boots or high Shoes, of black unglazed leather. The Commandant can furnish accurate directions for the Tailor's use, if desired. The Uniform can doubtless be better made, and more cheaply, by the University Tailor at Northfield than elsewhere. A reasonable time is allowed the newly admitted Cadet for wearing out the old suit, and procuring the new Uniform.

APPLICATIONS for admission, or for Circulars, or for further information, may be addressed to THE PRESIDENT.

NORWICH UNIVERSITY,

Northfield, Vermont.

NORWICH UNIVERSITY, Northfield, Vt., March 1873.



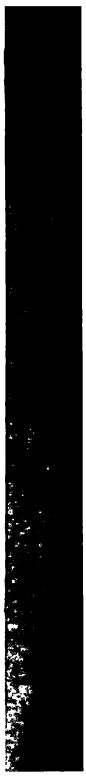
EDSON KIMBALL,	Northfield
HARRY TUDOR LYMAN,	West Randolph
JOHN ANDREW LOOKINLAND,	Highgate
CHARLES JAMES LUCK,	Rouses Point, N.
JOHN ROBERT MOORE,	Elizabeth, N. J.
BENJAMIN BALL NEWTON, Jr.,	Brooklyn, N. Y.
EDWARD PANCOST PITMAN,	Swanton
GEORGE WARREN PROCTOR,	Franklin, N. H.
FRANK HENRY REED,	Greenfield, Mass.
CHARLES WARREN REED,	St. Louis, Mo.
WALDO HENRY RICHARDSON,	New York, N. Y.
CYRUS FRANKLIN SAXE,	St. Albans
WILLIAM HENRY SAXE,	St. Albans
ARCHIE LORENZO SHELDON,	Rutland
ROBERT ALEXANDER SILVER,	Northfield
EDWARD TAYLOR SMITH,	St. Albans
GEORGE JOHN SPEAR,	Northfield
JOHN KERSWELL STEARNS,	Northfield
D'ORSEY TAYLOR,	St. Albans
GEORGE DELBERT THOMAS,	Northfield
ARNOLD THAYER,	New York, N. Y.
WILLIAM HERBERT TUCKER,	West Hartford
DEN EDWARD UPHAM,	Randolph
JOHN K. WAITE,	Norwich, N. Y.
CHARLES KILBURN WILLIAMS,	Rutland

University.

Preparatory

AND

Department.



College Preparatory and Business Department.

Object.

The primary object of this Department is to fit young men for Coll and also to provide for those who have neither time nor means to purs regular Collegiate course, such an education as will best enable them to form their duties as business men and citizens.

Location.

THE UNIVERSITY is situated in the heart of the Green Mountains, a ten miles from Montpelier, in the quiet and attractive Village of Northf The position is pleasant, easy of access by the Central Vermont Railroad, for healthfulness of climate and beauty of scenery Northfield is unsurpa by any Village in New England.

Discipline.

While striving to maintain a kind, impartial, and parental syste government, the *Discipline* is *Military* in character, and is specially desig to form habits of neatness, promptness, responsibility, subordination order. The members of this Department will become members of the c of Cadets, and the Drills and Exercises form a superb Gymnasium, con uting greatly to health, strength and the best physical development; self-possessed and easy manner, and a courteous and manly bearing.

THE DAILY ROUTINE, with its regular morning and evening hours Drum Beats and Bugle Calls, Reveille, Retreat, Tattoo and Taps; with it derly march to Recitations and Meals, its Drills, its Roll Calls, its Rep with its uniform dress, established discipline, impartial government, punctilious regard to respectful deportment and self-control in all officia lations; strongly encourages the formation of regular habits and scrupu attention to duties. It cherishes a sense of honorable responsibility in discharge of trusts; and, as experience uniformly shows, has a most wh some influence upon health and morals.

The whole training, physical, intellectual and moral, has for its obje develop a sound mind in a sound body, and to educate our youth to be ac healthy, good and useful citizens of this great Republic.

Instruction.

The students of the Preparatory Department will be received at not than thirteen years of age, and will be under the constant charge of a structor. The whole instruction of this Department may be relied upo thorough, kind and firm. It will be under the minute supervision o Principal, who will hold himself directly responsible for the conduct of pupil under his charge. He will aim to maintain such a relation to eac his pupils as will satisfy all Parents that the moral and physical well-b of their sons is carefully guarded. A monthly report of the standing of pupil is sent to their Parents.

Public Worship.

Prayers are held each week-day morning in the College Chapel, at 8 o'clock. On Sunday morning all Cadets will be required to attend Public worship in the Village, wherever their Parents and Guardians may elect. Otherwise they will attend the University Chapel, or wherever else they may be assigned.

The Course of Instruction

Embraces those studies necessary to fit young men for the various College Departments, or for a substantial practical education, and may extend over a period of three years, as follows:

COLLEGE PREPARATORY COURSE.

FIRST YEAR.

FIRST TERM—Latin; Arithmetic; Physiology.

SECOND TERM—Latin; Arithmetic; Physical Geography.

THIRD TERM—Latin; Arithmetic; History Rome.

SECOND YEAR.

FIRST TERM—Latin; Greek; Algebra; Declamations and Compositions throughout the Course.

SECOND TERM—Latin; Greek; Algebra.

THIRD TERM—Latin; Greek; Algebra.

THIRD YEAR.

FIRST TERM—Latin; Greek; Geometry.

SECOND TERM—Latin; Greek; Geometry.

THIRD TERM—Latin; Greek; History Greece.

ENGLISH COURSE.*

FIRST YEAR.

FIRST TERM—Eng. Grammar; Arithmetic; Physiology; Declamations and Compositions throughout the Course.

SECOND TERM—Eng. Grammar; Arithmetic; Physical Geography.

THIRD TERM—Eng. Grammar; Arithmetic; History Rome.

SECOND YEAR.

FIRST TERM—Algebra; Rhetoric; History Greece.

SECOND TERM—Algebra; Nat. Philosophy; Geometry.

THIRD TERM—Algebra; Geometry; Hist. and Constitution of U. S.

*Students who wish to take Latin in place of one of the Studies laid down in this Course, can do so.

BUSINESS COURSE.

ONE YEAR.

FIRST TERM—Arithmetic; Eng. Grammar; Nat. Philosophy.

SECOND TERM—Arithmetic; Eng. Grammar; Book-keeping.

THIRD TERM—Arithmetic; Eng. Grammar; Book-keeping and C
Law.

Reading and Spelling through the year.

Students who do not wish to take either of the entire Courses, may n
a selection of three Studies from either Course during the Terms for w
they are laid down.

Instruction in French or German will be given to those who desire it

Terms and Vacations.

Summer Term 1874, begins Thursday, April 9, and closes June 25, fol
ed by the Summer vacation of ten weeks. Fall Term of 1874-5, begins
tember 3, and closes November 26, followed by five weeks vacation. Wi
Term begins December 31, and closes March 26. Vacation of two we
Summer Term begins April 9, and closes July 1.

Arrangements may be made on liberal terms for Students who desi
remain and study under an instructor during the long Summer vacation.

Expenses.

The charge, in gross, for Tuition, Board, Fuel, Lights and Room rent,
the use of Arms and Equipments, is $300,00 per school year. The rooms
furnished with stove and bedstead; in other respects the students will fur
their own rooms. Arrangements will be made with Parents who cannot
company their sons, to provide furnished rooms if desired. Their expe
may be controlled by the Principal, who will, if desired, receive and acc
for the money invested for their benefit. Washing will be done a
University boarding-house, at reasonable rates. Students are earnestly
quested to have all clothing and bedding, towels, &c., plainly marked
full name.

The boarding-house is under the direction of the Principal, who,
his family, resides in it, thus living in constant and familiar intercourse
those under his charge.

The Entrance Uniform of the school will be furnished free of charg
to those who remain a year or more.

For further information, address the Principal,

Prof. CHARLES DOLE,

NORTHFIELD, VERMO

For Catalogues of information as to the regular College Course of
University, address the President,

Rev MALCOLM DOUGLASS, D

NORTHFIELD, Vt., April 1, 1874.

SPECIAL CIRCULAR.

It is proposed to add to this institution a new feature, *combining* the advantages of the private tutor with that public instruction which now prevails in our best schools. This the managers of NORWICH UNIVERSITY believe will prove the best means of educating those who can afford it, and more especially those who are fitting for College, or who desire to be thoroughly grounded in the rudiments of an education.

Edward Everett Hale, in *Old and New* for July, 1873, says:

Any first-rate classical teacher would readily take an average boy of fourteen, and undertake to fit him to read all the Latin required for his entrance into college in eighteen months, if the boy were his only pupil, and if the Latin were the chief work in hand. And no good Greek scholar, taking in hand this boy after he was able to read Latin into English, or English into Latin, at sight, would hesitate, in twelve months, to teach him the Greek required to enter into our best colleges, if, as before, he were his only pupil. Any such teacher, whether of Greek or Latin, would prefer to have the boy at the same time learning the amount of mathematics required at the best colleges. Two years and a half is ample for the whole affair, if you have but one pupil, if you yourself know the two languages thoroughly well, and are completely at ease with the mathematics; and supposing you are a first-rate teacher.

If, then, we choose to give five years to this process, it is because we choose to do it in the cheapest manner instead of the dearest. That is the whole of that matter.

If to such a boy, it were thought desirable to teach German, twelve months' additional time would be all that any competent teacher would claim to teach him enough of that language for the purposes desired, namely, its use in studying history and physical science.

The common phrase is perfectly true, which says that any language can be learned in a year.

Pass by the thirty boys best fitted for Harvard College this summer, and of the rest of the class entering there there will not be one who knows as much of Latin as any intelligent German emigrant on the

Bowery knows of English after he has been one year in this country, if he have fairly tried to learn English, Such a man studies with the keenest stimulus, it may be said. This is true enough. But, on the other hand, he has passed by that period of childhood or youth when the learning of language is the merest trifle, in comparison; the learning of language, in one form or another, being, in fact, precisely what childhood and youth are for.

Just what the first-class teacher we have supposed can do with one boy, he can do with two better than one, and with three better than two. Perhaps he can do with four or five pupils as much as with two or with one. But, after that number, he is over-weighted, if the boy's time is accounted of any value. His personal impulse becomes insignificant, and "the book" comes to be relied upon; which is to say, education ends, and mere routine work begins. For the practical business of teaching the classics and mathematics, no method has been hit on more satisfactory than that of the best private tutors in the English universities. One of these gentlemen takes, perhaps, four pupils. He meets A at nine o'clock. They sit at the same table; A does his work under his teacher's eye; they study together. The interest and life of the teacher quicken the pupil. The teacher shows the pupil the best ways of study. At ten o'clock he gives A his directions for his private study, and meets B alone for an hour, as he has met A. At eleven o'clock he meets C. At twelve o'clock he meets D. And at some other hour in the day he meets them all; and they all work together for an hour. The teacher is thus able to consider the personal need of the pupil, and to give him the full advantage of such consideration. The pupil is able to ask the teacher just what he wants, and to show his just what are his difficulties. At the same time, all the pupils meet each other in study aud recitation, compare notes, and go forward with the stimulus and sympathy of companionship.

Now, we venture to say that the first of the academies or high schools of this country which will adopt some such course as this, giving to every four boys whom it fits for college one teacher of the first and best ability, whose chief duty it shall be to see that they go through their last two years of preparation thoroughly well, will be the school or academy, which will, at whatever charge, receive the best and most promising pupils, and will receive the largest number of them. With a certain steady demand for superficial and almost worthless education, there is another demand for education of the very best type, the results of which may be relied upon. With the increase of the country in wealth, there grows up the determination to have that done in the best way which is done at all. And in proportion as the young men and young women learn that there are ways in which that can be done

in two years which they now do in four years, they, and those w
direct their education, will certainly insist upon the change.

The advantages of such a course must be apparent to every thoug
ful person, and we would recommend it as the cheaper way in the e
Hereafter, for all who desire it, we will provide a first-class teacher
every four or five students. This teacher will room in the buildi
with the students under his charge, and sit at the table with the
giving them the benefit of his constant care and association. While
departments will, of course, come under the oversight of the Pre
dent of the University, and be subordinate to the general rules a
regulations of the Corps of Cadets, this present arrangement will
under the immediate direction and charge of the Principal of the P
paratory Department.

There will be frequent examinations by the Faculty, and stude
will be advanced as fast as their acquirements will justify.

TERMS:

The charge in gross for instruction in this course will be $600
annum. This will include tuition, board, room rent, fuel, lights a
washing. They will be provided with neatly furnished rooms, b
each student will provide himself with sheets, pillow-cases, towe
napkins, etc.

It is desirable that students who wish to enter the University
coming year under this system of instruction should make the nec
sary arrangements as soon as possible, that they may be provided
in the best manner.

For further information upon this subject, inquiry may be made

Prof. CHARLES DOLE,
Principal of the Preparatory Department,
NORWICH UNIVERSITY,
NORTHFIELD, VT

CATALOGUE

OF THE

OFFICERS AND STUDENTS

OF



A MILITARY COLLEGE

NORTHFIELD, VERMONT.

1874-75.

[redacted]



CATALOGUE

OF THE

Officers AND Students

OF

NORWICH UNIVERSITY,

A MILITARY COLLEGE,

NORTHFIELD, VERMONT,

1874-75.

MONTPELIER, VT.,
ARGUS AND PATRIOT STEAM JOB PRINTING HOUSE,

CALENDAR.

1874—September 3d.	Fall Term began,	Thursday.
November 26th,	Fall Term ends,	Thursday.

WINTER VACATION OF FIVE WEEKS.

December 31st,	Winter Term begins,	Thursday.
1875—March 26th,	Winter Term ends,	Thursday.

SPRING VACATION OF TWO WEEKS.

April 4th,	Summer Term begins,	Thursday.
June 22d,	Annual Examinations,	Tuesday.
June 24th,	Annual Encampment begins,	Thursday.
June 27th,	Baccalaureate Sermon,	Sunday.
June 30th,	Examinations for Admission,	Wednesday.
July 1st,	Commencement,	Thursday.

SUMMER VACATION OF NINE WEEKS.

September 2d,	Fall Term begins,	Thursday.

The terms always begin and end at Retreat on Thursday at sunset.

CORPORATION.

The Rev. MALCOLM DOUGLASS, D. D., President.
The Rev. JOSIAH SWETT, D. D., Secretary.
Hon. GEORGE NICHOLS, M. D., Treasurer.
Prof. CHARLES DOLE, Assistant Treasurer.

The Rt. Rev. WILLIAM H. A. BISSELL, D. D., Burlington.
Hon. DUDLEY C. DENISON, Royalton.
Rev. JOSIAH SWETT, D. D., Fairfax.
Hon. RODERICK RICHARDSON, Boston, Mass.
Col. HENRY O. KENT, Lancaster, N. H.
Hon. VICTOR ATWOOD, St. Albans.
Rev. ROGER S. HOWARD, D. D., Webster, Mass.
Rev. JAMES H. EAMES, D. D., Concord, N. H.
Hon. GEORGE NICHOLS, M. D., Northfield.
Hon. P. D. BRADFORD, A. M., M. D., Northfield.
Mr. PERLEY BELKNAP, Northfield.
Rev. FRANCIS W. SMITH, St. Albans.
Hon. HENRY CLARK, Rutland.
Col. LEVI G. KINGSLEY, Rutland.
Hon. CHARLES DEWEY, Montpelier.
Mr. WYMAN FLINT, Bellows Falls.
Rev. J. ISHAM BLISS, Bennington.
Col. CHARLES B. STOUGHTON, New York.
Mr. JOHN W. HOBART, St. Albans.
Mr. HIRAM ATKINS, Montpelier.
GEORGE M. FISK, Esq., Northfield.
Mr. THOMAS J. LASIER, Claremont, N. H.
Col. KITTRIDGE HASKINS, Brattleboro.
Rev. CHARLES T. OGDEN, Bellows Falls.

FACULTY.

Rev. MALCOLM DOUGLASS, D. D., President,

Professor of Intellectual Philosophy and Christian Ethics.

ALONZO JACKMAN, LL. D.

Professor of Mathematics and Civil Engineering.

..... *

Professor of the Greek Language and Literature.

CAPT. CHARLES A. CURTIS, A. B., U. S. A.,

Professor of Military Science by appointment of the U. S. Government.

CHARLES DOLE, A. M.,

Rhetoric and History.

ADRIAN SCOTT, A. B.,

Acting-Professor of the Latin Language and Literature.

WALTER DOLE, B. S.,

Tutor in Mathematics and the English Language.

WILLIAM M. RUMBAUGH.,

Cadet Tutor in Mathematics.

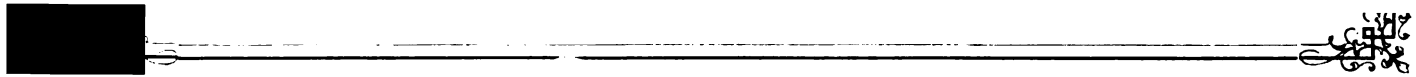
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Professor of Modern Language and Drawing.

PHILANDER D. BRADFORD, M. D., Librarian,

Lecturer on Natural History and Physiology.

*The President has charge of the classes in Drawing, and Prof. Scott of the classes in Greek and Modern Languages.



First Five Cadets on Conduct Roll.

1872-73.

Charles James Luck,	Rouse's Point, N. Y.
David Bates Douglass,	Northfield, Vt.
Frank Richard Bates,	Northfield, Vt.
William Ripley Dorr,	Rutland, Vt.
Benjamin Hale Douglass,	Northfield, Vt.

1873-74.

William Moser Rumbaugh,	Mt. Pleasant, Penn.
Charles James Luck,	Rouse's Point, N. Y.
Benjamin Hale Douglass,	Northfield, Vt.
David Bates Douglass,	Northfield, Vt.
Harry Bates Thayer,	Northfield, Vt.

President's Gold Medalist.

1872.

Frank Zeno Kimball,	Northfield, Vt.

1874.

Edward Denslow Upham,	West Randolph, Vt.

President's Silver Medalist.

1873.

Edward Denslow Upham,	West Randolph, Vt.

Graduating Class, 1873.

Alvin Morton Bailey,	Montreal, P. Q.
Frank Richard Bates,	Northfield, Vt.
Paris Augustus Eastman,	Rutland, Vt.
William Ripley Dorr,	Rutland, Vt.
Harry Tudor Lyman,	West Randolph, Vt.
Archie Lorenzo Sheldon,	Rutland, Vt.
John Robert Moore,	Elizabeth, N. Y.
George Lemuel Huntoon,*	Lawrence, Mass.

Graduating Class, 1874.

Charles Edward Field,	Greenfield, Mass,
Robert Alexander Silver,	Northfield.
Den. Edward Upham, (Gold Medalist,)	West Randolph.

*Received an Honorable Testimonial.

ROSTER OF CADETS.

Henry Fullerton Arms,	Bellows Falls.
Archie Mead Batchelder,	Plainfield.
Matthew Jones Brennan,	New York, N. Y.
George Henry Chase,	Windsor.
Horace Alonzo Clifford,	Northfield.
Loomis Stevens Cull,	Belvidere.
William Russell Curtis,	Yarmouth, Me.
Thomas Dewey,	Montpelier.
Harry Christopher Dole,	Northfield.
Benjamin Hale Douglass,	Northfield.
David Bates Douglass,	Northfield.
Henry Bowman Douglas,	Wilkesbarre, Penn.
Frank Douglas,	Wilkesbarre, Penn.
Fred Earl DuBois,	West Randolph,
George Edward Edson,	St. Albans.
William Henry Ferris,	Northfield.
Frank Gardner Flint,	Bellows Falls.
James Hopkins Gibbs,	Ogdensburg, N. Y.
Harry Joseph Tenison Halsey,	New York, N. Y.
Frank Clark Hatch,	Woodstock.
Carrington Isaac Hayes,	Unadilla, N. Y.
Frank Eugene Hiland,	Bradford.
William Hooper,	Boston, Mass.
Eben Barlow Jewell,	St. Albans.
Thomas Scott Lambert,	New York, N. Y.
Charles James Luck,	Rouse's Point, N. Y.
Edward Sprague Marsh,	Brandon.
Theodore Chardavoyne McIlwaine,	Essex, N. Y.
George Parker,	Northfield.
Frank Henry Parker,	Northfield.
Waldo Henry Richardson,	New York, N. Y.
Henry Hume Rice,	Carson, Nevada.
Frank Solo Robinson,	Northfield.
Eugene Robinson Ross,	Rutland.
William Moser Rumbaugh,	Mt. Pleasant, Penn.

George Shea, Jr.,	New York, N. Y.
Fred Francis Sherman,	Lawrence, Mass.
Henry Leslie Sherman,	Gaysville.
Leander Sinotte,	New York, N. Y.
Burleigh Fulsom Spaulding,	St. Johnsbury.
William Tolman Sprague,	Boston, Mass.
John Kerswell Stearns,	Woodstock.
Robert Munson Stephens,	Hackettstown, N. J.
Arnold Thayer,	Brooklyn, N. Y.
Henry Bates Thayer,	Northfield.
George Henry Delbert Thomas,	Northfield.
Charles William Wheeler,	St. Albans.
Edwin Porter White,	Northfield.
Julius Hayden Woodward,	Brandon.

CIRCULAR.

Norwich University is located in the village of Northfield, Vermont, about ten miles south of Montpelier, and near the center of the State. It is easily accessible by the Central Vermont Railroad, which connects at St. Albans with trains from Canada and the West; at Essex Junction with trains from Rutland, Troy, Hudson River and N. Y. Central Railroads; and at White River Junction, on the Connecticut River, with the trains from Boston, over the Boston, Lowell, Nashua, Concord, and Northern Railroads, or the Boston Fitchburg and Cheshire Railroads; and with trains out of Springfield and points South connecting with New York. It is two hours journey from Burlington, Vt.; nine hours from Boston, and twelve hours from New York City.

Perhaps no more convenient site exists in New England for the purposes of an institution of learning. Removed from distracting influences, and temptations to vice, which proximity to a city always present, Norwich University occupies one of the healthiest locations to be found in the Union, one where pure air and imposing mountain scenery unite to inspire man physically and mentally with better attributes. If the teaching of History is that the liberty loving mountaineers of all ages have never deteriorated morally, intellectually, or physically, does it not become the part of wisdom to bring young men in the formative stage of their lives under influences calculated to give such a desirable bias to their character?

From the first establishment of this school under Capt. Partridge, one of the earliest Superintendents of West Point, the study of Mathematics and Civil Engineering has been a speciality, the text books used being those of the so-called "West Point course," and the system of instruction being modeled after that of the justly celebrated National school. While the study of abstract science has been thus carefully adhered to from a conviction that experience has proved its wisdom; classical study and the natural sciences have been placed upon the same footing from a belief that their influence is essential in producing a disciplined, full-rounded intellect, which shall enter upon life's work with the essentials of success in itself.

As, in addition to this, Norwich University is required by her charter to furnish a course of "Military Instruction, both theoretical and practical," her discipline is, of necessity, *Military* in form and principle. It is believed that nothing in the way of college supervision has yet been devised equal to this in forming habits of responsibility, promptness, subordination and order. The daily routine of Military duties, together with punctilious regard to respectful deportment and self-control in all official relations, strongly encourages the formation of regular habits, and cherishes a sense of honorable responsibility. The military drill forms an excellent series of gymnastic exercises, and contributes all that the best gymnasiums can to health, strength, and the best physical development. For practical instruction in Camp Regulations, Customs and Duties, a week is spent in actual encampment, just previous to the annual Commencement, after the classes have

Academic standing depends upon recitations. Military standing upon marks of Merit or Demerit. Immoralities, technical and minor offences, are marked with demerits, and are punishable in other ways. Every Cadet whose demerits exceed his merits by 75 during a term is liable to suspension or expulsion, as circumstances may decide. Wherever purely academic duties require variation in special matters, the analogies of approved Military usage are maintained, so far as practicable. The Commandant, an officer of the regular army, appointed by the government, has charge and oversight of the Military quarters, the daily routine, the identification of offences, and all Military technicalities. All permits to go beyond certain fixed limits; all matters of more than purely military command, temporary interest, or routine; all cases of grave offence or misunderstanding, and those which affect the connection of a student with the University, are referred to the President.

The students, like those of West Point, are called Cadets, and are under military discipline. The commissioned and non-commissioned officers are appointed from the Senior Class, in the order of merit, and for soldierly bearing. The Seniors, Juniors, and Sophomores act in rotation as Officers of the Day. Every Cadet is required to wear the uniform of the University during term time, unless special permission is given to the contrary. The Cadets are instructed theoretically and practically in Infantry and Artillery Tactics and Drill, Bayonet and Sword exercise, Fortification, Reconnoissance Castrametation, and in Guard and Outpost Duty. The University has been furnished by the U. S. Ordnance Department with arms and equipments of the most modern construction.

The Corps of Cadets furnishes one company of Infantry to the Regiment of Vermont Militia, and the one section of Artillery in the State. Enlistment in these is strongly recommended. The Professor of Military Science is made by law their commander, and the University is pledged for their right discipline and good behavior.

UNIFORM.

A double-breasted Frock Coat of dark blue cloth; University buttons; Trousers, dark blue, with light blue welt; Black Cravat; U. S. Shako with usual gilt ornaments, black pompon; Forage Cap; Boots or high Shoes, of black unglazed leather. The Commandant can furnish accurate directions for the tailor's use, if desired. The Uniform can doubtless be better made, and more cheaply, by the university tailor at Northfield than elsewhere. A reasonable time is allowed the newly admitted Cadet for wearing out the old suit, and procuring the new Uniform.

PUBLIC WORSHIP.

Prayers are held before the opening of the academic exercises on each week-day morning at 8 o'clock. Upon Sunday morning every Cadet is required to attend divine service with some one of the village congregations, the choice being made at the beginning of the term by the Cadet himself, if of age, or otherwise by his parents or guardian, and adhered to throughout the term. The village societies to which the choice is thus limited are Episcopalian, Congregationalist, Methodist, Universalist, and Roman Catholic. Where all choice in the matter is waived Cadets will attend the Episcopal Church.

REQUIREMENTS FOR ADMISSION.

All candidates for admission to the Freshman Class in any of the College Courses must be at least fifteen years of age, and must present satisfactory evidence of a good moral character.

CLASSICAL COURSE.

Candidates for this course will be examined in the following studies:

GREEK—Goodwin's Greek Grammar; Leighton's Greek Lessons; Pennell's Ancient Greece; Xenophon's Anabasis, Books I–IV.; Homer's Iliad, I, II, omitting the Catalogue of the Forces.

LATIN—Allen & Greenough's, or Harkness' Revised Latin Grammar; Leighton's Latin Lessons, or Harkness' Latin Prose Composition; Cæsar's Commentaries, Books I.–III.; Virgil's Æneid, Books I.–VI.; Cicero's Orations against Cataline, on the Manilian Law, for the poet Archias, and for Marcellus.

MATHEMATICS—Arithmetic; Algebra to Quadratics; and Geometry, four books; Davies' Bourdon's Algebra, and Legendre preferred.

ENGLISH—English Grammar; Geography; and History of the United States.

Instead of the above, whether matter or text books, real equivalents will be accepted.

SCIENTIFIC COURSE.

MATHEMATICS—Arithmetic; Algebra to Quadratics; Geometry, four books.

ENGLISH—English Grammar; Quackenbos' or some equivalent work on Rhetoric; Geography, and History of the United States.

SPECIAL COURSE IN PHILOSOPHY.

This Course is arranged with a view to meeting the wants of those who wish to enter the profession of Medicine or Law, but who feel the need of the preliminary training and mental culture afforded by a critical drill in Mathematics and Language. The full Course will occupy three years, and the requirements for admission will be the same as for the Scientific Course, except that the examination in Algebra will extend through Quadratics.

ADVANCED STANDING.

Candidates for advanced standing will be examined in the previous studies for the course they propose to enter, and if they come from another institution will present certificates of honorable dis-

SECOND TERM.	Rhetoric, Political Economy, Physics, Calculus.
THIRD TERM.	Botany and Zoology, Moral Philosophy; Evidences, Physics, Mechanics.]

Drawing.—Linear Perspective; Mechanical; Topographical.

Military Instruction—Infantry and Artillery Drill; Guard and Outpost Duty; Lectures on Military subjects.

SENIOR YEAR.

FIRST TERM.	Butler's Analogy, Mediæval History, German, Elective [Acoustics and Optics.
SECOND TERM.	Mental Philosophy, Modern History, German, Astronomy.]
THIRD TERM.	Constitutional and International Law, Geology and Mineralogy, German.

Drawing—Architectural.

Military Instruction.—Artillery Drill; Signals; Fencing; Art of War; Manual for Engineer Troops.



JUNIOR YEAR.

First Term.	Analytical Geometry,
	Chemistry,
	Logic,
Second Term.	Calculus,
	Political Economy,
	Rhetoric,
	Mechanical Drawing.
Third Term.	Mechanics,
	Zoology and Botany,
	Ethics and Evidences of Christianity.
	Topographical Drawing.

Drawing—Linear Perspective.

Military Instruction.—Infantry and Artillery Drill: Guard and Outpost Duty: Lectures on Military Subjects.

SENIOR YEAR.

First Term.	Acoustics and Optics.
	Butler's Analogy.
	Mediæval History.
Second Term.	Astronomy.
	Mental Philosophy.
	Modern History.
Third Term.	Geology and Mineralogy,
	Constitutional and International Law.

Architectural Drawing throughout the year.

Military Instruction—Artillery Drill: Signals: Fencing: Art of War: Manual for Engineer Troops.

Course in Philosophy.

FIRST YEAR.

First Term.	Geometry, Algebra, Greek, or Latin.
Second Term.	Geometry, Descriptive Geometry, Greek, or Latin.
Third Term.	Zoology and Botany, Trigonometry and Surveying, Greek, or Latin.

SECOND YEAR.

First Term.	Chemistry, Logic, Greek, or Latin.
Second Term.	Physics, Rhetoric, Greek, or Latin.
Third Term.	Physics, Moral Philosophy, Greek, or Latin.

THIRD YEAR.

First Term.	English Literature. Mediæval History, German.
Second Term.	Political Economy, Modern History. German.
Third Term.	Constitutional and International Law. Geology and Mineralogy. German.

Drawing and Military Instruction the same as in the Scientific Course.

Students in each of the foregoing Courses will be required to present Compositions and Essays, and to publicly deliver Declamations and Original Orations throughout the Course.

DEGREES.

The Degree of Bachelor of Arts is conferred upon students who complete the Classical Course, and pass the examinations in the same.

The Degree of Bachelor of Science is conferred upon students who complete the Scientific Course, and pass the examinations in the same.

The Degree of Bachelor of Philosophy is conferred upon students who complete the Course in Philosophy, and pass the examinations in the same.

The Master's Degree will be conferred upon graduates of three years' standing, who shall have engaged during that period in professional, or in literary and scientific studies.

SEOCND TERM.	Cicero, Xenophon's Anabasis, Geometry, Shakspeare.
THIRD TERM.	Cicero, Homer Iliad Review of Mathematics. Rhetoric.

Classical Course

PREPARATORY TO COLLEGE.

FIRST YEAR.

First Term.	Latin Grammar and Reader,
	Arithmetic,
	Physical Geography.
Second Term.	Latin Grammar and Reader.
	Arithmetic,
	Physical Geography and Physiology,
Third Term.	Latin Grammar and Reader,
	Arithmetic,
	Physiology.

Reading and Spelling throughout the year.

SECOND YEAR.

First Term.	Latin, Cæsar,
	Greek, Grammar and Reader.
	Algebra,
	English Etymology.
Second Term.	Cæsar,
	Grammar and Reader,
	Algebra,
	Etymology.
Third Term.	Virgil,
	Grammar and Reader.
	Algebra,
	Etymology.

THIRD YEAR.

First Term.	Latin Virgil,
	Greek, Xenophon's Anabasis,
	Geometry,

Preparatory Department.

SPECIAL COURSE.

CIRCULAR.

The *best* way to educate boys, and fit them for college, is the *cheapest* way. Believing this, and that there is a steady demand for education of the very best style, the results of which can be relied upon, the managers of Norwich University a few months ago determined to provide for a course of instruction preparatory to college and special schools of science, which should combine the advantages of a private tutor, with that drill and incentive to study which the class-room alone affords. This we believe to be the best means for educating boys, especially to fit them for college.

Rev. Edward Everett Hale, in *Old and New* for July, 1873, says:

"Any first-rate classical teacher would readily take an average boy of fourteen, and undertake to fit him to read all the Latin required for his entrance into college in eighteen months, if the boy were his only pupil, and if the Latin were the chief work in hand. And no good Greek scholar, taking in hand this boy after he was able to read Latin into English, or English into Latin, at sight, would hesitate, in twelve months, to teach him the Greek required to enter our best colleges, if, as before, he were his only pupil. Any such teacher, whether of Greek or Latin, would prefer to have the boy at the same time learning the amount of mathematics required at the best colleges. Two years and a half is ample for the whole affair, if you have but one pupil, if you yourself know the two languages thoroughly well, and are completely at ease with the mathematics; and supposing you are a first-rate teacher."

"If, then, we choose to give five years to this process, it is because we choose to do it in the cheapest manner instead of the dearest. That is the whole of that matter."

"If to such a boy, it were thought desirable to teach German, twelve months' additional time would be all that any competent teacher would claim to teach him enough of that language for the purposes desired, namely, its use in studying history and physical science."

"The common phrase is perfectly true, which says that any language can be learned in a year."

"Just what the first-class teacher we have supposed can do with one boy, he can do with two better than one, and with three better than two. Perhaps he can do with four or five pupils as much as with two or one. But after that number he is overweighted, if the boy's time is accounted of any value. His personal impulse becomes insignificant, and "the book" comes to be relied upon; which is to say, education ends, and mere routine work begins. For the practical business of teaching the classics and mathematics, no method has been hit on more satisfactory than that of the best private tutors in the English universities. One of these gentlemen takes, perhaps, four pupils. He meets A at nine o'clock. They sit at the same table; A does his work under the teacher's eye; they study together. The interest and life of the teacher quicken the pupil. The teacher shows the pupil the best ways of study. At ten o'clock he gives A his directions for his private study, and meets B alone for an hour, as

English Course.

FIRST YEAR.

FIRST TERM.	Arithmetic.
	Physical Geography,
Elective	{ English Grammar,
	{ Latin Grammar and Reader.
SECOND TERM.	Arithmetic,
	Physical Geography and Physiology.
	English Grammar,
	Latin Grammar and Reader.
THIRD TERM.	Arithmetic,
	Physiology,
	{ English Grammar,
	{ Latin Grammar and Reader.

Reading and Spelling throughout the year.

SECOND YEAR.

FIRST TERM.	Algebra,
	Geometry,
Elective	{ Latin Cæsar,
	{ History of Greece,
	English of Shakespeare.
SECOND TERM.	Algebra,
	Geometry,
	Cæsar,
	History of Rome,
	Shakespeare.
THIRD TERM.	Algebra,
	Review of Mathematics,
	Virgil,
	Rhetoric.

Throughout the entire Course Declamations and Compositions will be required on alternate weeks.

EXPENSES.

The charge in gross for Tuition, Board, Washing, Fuel, Lights, Room, Stove, Bedstead, and the use of Arms and Equipments, is $300 per annum, for all courses except the "Special Course." Washing means 1½ dozen per week, extra washing 60 cents per dozen; extra charge will be made for pantaloons, white vests, coats and other heavy articles. Fuel means two cords of good wood to each student; more will be furnished, if desired, at cost; but experience has proved this amount to be amply sufficient if judiciously used.

There will be an incidental charge of $2.00 each. per Term, to be used in keeping the students rooms and halls in good order, and for such other purposes as the needs of the students may seem to require. Expenses caused by wanton injury will be divided among the bills, if the perpetrators cannot be ascertained. Cadets who are appointed as musicians will have $75.00 remitted.

Bills are payable by the Term strictly in advance. If any student leaves the institution before the close of the Term for which he has paid, for any sufficient reason other than suspension or expulsion, the amount justly due him for the unexpired time will be remitted.

Should any deserving person of straitened means seeking an education desire information as to special terms, they are referred to Prof. Charles Dole, Assistant Treasurer.

All students should come well supplied with sheets, blankets, pillow cases, towels, napkins, and toilet articles.

Every article of clothing for the laundry must be plainly marked with full name. Articles with no name, or name nearly illegible, will not be received at the laundry.

/r

CIRCULAR

OF THE

Norwich University

SCIENTIFIC

AND

MILITARY COLLEGE,

NORTHFIELD, VERMONT.

1878-9.

MONTPELIER, VT.:
Argus and Patriot Steam Book and Job Printing Works
1878.

W. U. Cat

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NORTHFIELD, VERMONT.

1878-9.



MONTPELIER, VT.:
Argus and Patriot Steam Book and Job Printing Works.
1878.





ACADEMIC STAFF.

CAPT. CHARLES A. CURTIS, A. M., U. S. ARMY,
PRESIDENT,
ıd Professor of Military Science by appointment of U. S. Government.

ALONZO JACKMAN, LL. D.,
rofessor of Mathematics, Natural Philosophy and Civil Engineering.

CHARLES DOLE, A. M.,
Professor of Rhetoric, History, English Literature, and Instructor in Tactics.

CHARLES E. H. GESTRIN, Ph. D.,
Professor of the Latin, French and German Languages.

WILLIAM M. RUMBAUGH, B. S.,
Professor of Drawing and Assistant Instructor in Mathematics and Tactics.

PHILANDER D. BRADFORD, M. D.,
Lecturer in Natural History and Physiology.

F. WESTON BARTLETT, A. M.,
Professor of Moral and Intellectual Philosophy.

MILITARY STAFF.

CAPT. CHARLES A. CURTIS, U. S. Army.
Commandant.

LIEUT. CHARLES DOLE, V. N. G.,
Commissary and Steward.

LIEUT. WILLIAM M. RUMBAUGH, V. N. G.,
Adjutant and Quartermaster.

PHILANDER D. BRADFORD,
Surgeon.

REV. F. WESTON BARTLETT,
Chaplain.

CADET LIEUT. CHARLES H. SPOONER,
Adjutant Corps of Cadets.

JAMES EVANS,
Janitor and Armorer.

Norwich University,

Northfield, Vt., Feb. 8, 1878.

Public:

'HE MILITARY COLLEGE is situated near the center of te of Vermont, in the quiet and attractive village of eld, where comparatively few temptations invite to idle- d dissipation. The position is pleasant, easy of ac- means of the Central Vermont Railroad, and very , even for healthy Vermont.

IIS COLLEGE, by her works for nearly forty-five years id more especially in the late war, by her extraordina- ribution to the Army of twelve General Officers, forty ls, and a host of educated officers of the lower grades, ned a title to the generous confidence of the public.

IE COURSE OF INSTRUCTION embraces the usual stud- i good scientific education, while her charter makes ngineering and Military Science a distinguishing fea-

HER SYSTEM OF MILITARY DISCIPLINE is specially :d to form habits of responsibility, promptness, sub- ion and order. The drills and exercises form an ex- gymnasium, and contribute greatly to health, strength : best physical development, to a self-possessed and inner, and a courteous and manly bearing.

IE DAILY ROUTINE, with its regular morning and even- irs, its Drum-Beats and Bugle Calls, Reveille, Retreat, and Taps; with its orderly march to Recitation and its Drills, its Roll Calls, its Reports; with its uniform

dress, established discipline, impartial government, and pu
tilious regard to respectful deportment and self-control
all Official relations, strongly encourages the formation
regular habits and scrupulous attention to duties. It cheri
es a sense of honorable responsibility in the discharge
trusts ; and, as experience uniformly shows, has a most who
some influence upon health and morals.

The whole training, physical, intellectual and moral, h
for its object to develop a sound mind in a sound body, a
to educate our youth to be active, healthy, good and use
citizens of this great Republic.

To all those who desire for their sons, or wards, a rig
training of the head and heart, and desire also to unite wi
it the Physical and Moral benefits of a THOROUGH MILITA
EDUCATION, DISCIPLINE AND DRILL, under the most fav
able circumstances, and with surroundings of the most whol
some influence, the MILITARY COLLEGE presents her clain

CHARLES A. CURTIS,

CAPTAIN UNITED STATES ARMY,

PRESIDEN

Requirements for Admission.

All candidates for admission to the Freshman Class must be at least fifteen years of age, and must present satisfactory evidence of good moral character.

Candidates will be examined in the following studies:

MATHEMATICS.—Arithmetic; Algebra, through simple equations; Geometry, four books of Davies' Legendre, or its equivalent.

ENGLISH LANGUAGE.—Grammar, Composition, with special attention to Punctuation and the use of Capitals.

GEOGRAPHY.—Physical and Political Geography.

HISTORY.—History of the United States.

LATIN.—Allen and Greenough's or Harkness' Latin Grammar and Latin Prose Composition, Cæsar's Commentaries, books I–III, six orations of Cicero, six books of Virgil's Æneid.

Graduates from High-Schools may enter without examination, and their ability to continue in the course will be determined by the examination at the close of the first term.

NOTE.—*Students who do not elect Latin through the course, are not required to be examined in it.*

ADVANCED STANDING.

Candidates for advanced standing will be examined in all the previous studies of the course, and if they come from another institution will present certificates of honorable dismission.

SPECIAL STUDIES.

Candidates not applicants for a degree, will be allowed to go into any class for which they are fitted, and pursue a special course.

For requirements for admission to Academic and Business Course, see page 8th.

Academic and Business Cours

The design of this course is to fit young men in the m thorough manner for the best higher scientific courses, a for practical and professional business life.

REQUIREMENTS FOR ADMISSION.

Candidates for admission to the first year of this cou must be at least fourteen years of age, of good charact and able to pass a satisfactory examination in Reading, Sp ing, Geography and Arithmetic, through Fractions.

Any person completing this course and passing a satisf tory examination in all the studies required, will be give certificate by the Faculty, showing that he has successfu completed such course.

The full course for three years is as follows:

FIRST YEAR.

Latin Grammar and Reader, [Elective]; English Gra mar and Rhetoric; Arithmetic; History of the United Stat Composition and Elocution.

SECOND YEAR.

Latin, Cæsar, Cicero, [Elective]; Algebra; Geomet English Analysis; Physical Geography; Exercises in Co position and Elocution.

THIRD YEAR.

Latin, Virgil, Prose Composition, or French, [Electiv Natural Philosophy; History; Elementary Chemistry; l view of Mathematics; Drawing, Free Hand and Geom rical; Exercises in Composition and Elocution.

Course of Study.

FRESHMAN YEAR.

IEMATICS:
- ALGEBRA,* - - *Davies' Bourdon.*
- ALGEBRAIC PROBLEMS, *Robinson.*
- GEOMETRY, - - *Davies' Legendre.*
- TRIGONOMETRY: Plane; Analytical and Spherical, - - - - - *Davies.*

CH: Grammar, - - - - - - - - *Otto.*

I: Livy, Horace, Harkness' Latin Prose Composition.

)RY.

OSITION AND ELOCUTION.

ING: FREE HAND AND GEOMETRICAL. EXERCISES IN CRAYON DRAWING.

ARY INSTRUCTION: Infantry Drill, Sword and Bayonet Exercise.

SOPHOMORE YEAR.

IEMATICS:
- SURVEYING; Theory and Practice with Chain and Compass
- DESCRIPTIVE GEOMETRY; Plane Problems; Tangent Planes; Intersection of Solids; Spherical Projection. } *Church.*
- SHADES AND SHADOWS; Theory and Drawing.
- LINEAR PERSPECTIVE;
- ISOMETRIC PERSPECTIVE. } *Church.*
- ANALYTICAL GEOMETRY; Equations of Lines; Gonic Sections. *Davies.*

study of ALGEBRA and GEOMETRY will begin at the beginning.

COMPOSITION AND ELOCUTION.

FRENCH: Grammar; Composition.

PHYSICS: Chemistry and Analytical Chemistry. *Youman.*

HISTORY.

DRAWING: { LINE SHADING. / BINN'S ORTHOGRAPHIC PROJECTIONS. / PROJECTION OF SHADOWS AND PERSPECTIVE. }

MILITARY INSTRUCTION: Infantry Drill; Sword and Bayonet exercise; Lectures on Customs of the Service.

JUNIOR YEAR.

MATHEMATICS: CALCULUS, Differential and Integral. *Church.*

MECHANICS: { Of Solids, Liquids, Gasses, and Molecutes; and their application in practical results. } *Peck.*

NATURAL PHILOSOPHY: Acoustics and Optics, - *Bartlett.*

LOGIC, - - - - - - - - - - *Whately.*

RHETORIC, - - - - - - - - - *Haven.*

POLITICAL ECONOMY, - - - - - - *Perry.*

HISTORY.

ZOOLOGY.—Elective,

BOTANY.—Elective,

GERMAN: Grammar; Translation from English into German; Schiller's Wilhelm Tell.

COMPOSITION AND ELOCUTION.

DRAWING: { Shading and Tinting; Machine Drawing, including Bridge Drawings, / Topography; Field Practice and Drawing. }

MILITARY INSTRUCTION: Infantry and Artillery Drill; Guard and Out-post Duty; Lectures on Military Subjects.

SENIOR YEAR.

ASTRONOMY: { PHYSICAL and SPHERICAL, and its Nautical application in establishing latitude and longitude. } *Robinson.*

IL ERING:	THEORY; Roads; Bridges; Tunnels; Canals; Strength of Material; Leveling and Railroad Curves.	*Mahan.*
	PRACTICAL OPERATIONS; Use of Level and Theodolite: Leveling for Section and Working Drawings.	*Simms.*

IY, - - - - - - - - - *Dana.*

LOGY, - - - - - - - - *Dana.*

. PHILOSOPHY, - - - - - - *Wayland.*

S IN ENGLISH LANGUAGE AND LITERATURE.

TUTIONAL LAW, - - - - - *Townsend.*

ATIONAL LAW, - - - - - - *Woolsey.*

T: Grammar; Syntax; Goethe's Herman and Dor-; Schiller's Marie Stuart; Conversational Exercises.

NG: Architectural,

RY INSTRUCTION: Artillery Drill; Signals; Military raph; Cyphers; Fencing; Art of War; Manual for eer Troops.

DEGREES.

The Degree of BACHELOR OF SCIENCE is conferr students who complete the course, and pass a sati examination in the same.

The Degree of MASTER OF SCIENCE will be confe on graduates of three years standing, who shall h gaged during that time in professional, literary, or s pursuits.

The Degree of CIVIL ENGINEER will be conferre Graduates of three years standing, who shall have the profession of an Engineer during that time.

GRADES.

The grades are determined with the greatest c accuracy, and, as shown in the Merit Roll of the give a correct and comprehensive view of the cond scholarship of the Cadets.

100 is the Normal Grade in each department of st conduct, and its retainment implies perfectness in det. This grade is lowered by violation of rules, ne duty, or deficient scholarship, in proportion to the gr the offence.

When, in any department, the grade of a cadet zero he is, *ipso facto*, dismissed from the College.

The GRADE OF HONOR is conferred upon the si whose names have been reported to the Trustees fo lence in all departments.

In calculating the average grade,

Deportment,	counts	
Scholarship,	"	
Military Exercises,	"	

Miscellaneous.

Academic standing depends upon recitations; Military standing upon marks of Merit or Demerit. Immoralities, technical and minor offences, are marked with demerits, and are punishable in other ways. Wherever purely academic duties require variation in special matters, the analogies of Military usage are maintained, so far as practicable. The President, an officer of the regular army, appointed by the government, has charge and oversight of the Military quarters, the daily routine, the identification of offences, and all Military technicalities.

The students are called Cadets, and are under military discipline. The commissioned and non-commissioned officers are appointed from the Senior Class, in the order of merit and soldierly bearing. The Seniors and Juniors act in rotation as Officers of the Day. Every Cadet is required to wear the uniform of the College during term time. The Cadets are instructed theoretically and practically in Infantry and Artillery Tactics and Drill, Bayonet and Sword exercise, Fortification, Reconnoissance, Castrametation, and in Guard and Out-post Duty. The College has been furnished by the U. S. Ordnance Department with arms and equipments of the most modern construction; and the U. S. Signal Bureau has furnished apparatus for day and night signals and telegraphy, with Field glasses, etc.

UNIFORM.

A single-breasted Dress Coat of dark blue cloth; College buttons; Trousers, dark blue, with light blue stripe; Black Cravat; U. S. Shako, with usual gilt ornaments, red and white pompon; Forage Cap; Boots or high Shoes, of black unglazed leather. The Commandant can furnish accurate directions for the tailor's use, if desired. The Uniform can doubtless be better made, and more cheaply, by the College tailor at Northfield than elsewhere. A reasonable time is allowed the newly admitted Cadet for wearing out the old suit, and procuring the new Uniform.

All students should come well supplied with sheets, blankets, pillow cases, towels, napkins, and toilet articles.

Every article of clothing for the laundry must be plainly marked with full name. Articles with no name, or name nearly illegible, will not be received at the laundry.

PUBLIC WORSHIP.

Prayers are held before the opening of the academic exercises on each week-day morning, at 8 o'clock. Upon Sunday morning every Cadet is required to attend divine service with some one of the village congregations, the choice being made at the beginning of the term by the Cadet himself, if of age, or otherwise by his parents or guardian, and adhered to throughout the term. The village societies to which the choice is thus limited are Episcopal, Roman Catholic, Universalist, Congregationalist, and Methodist.

ADMISSION, DUTIES, ETC.

Candidates for admission will report promptly to the President. They will furnish a certificate of good moral character, and will sign the rules and regulations of the College.

All Cadets will pursue the regular course of study, as heretofore laid down; and all will be equally subject to the regulations in regard to uniform, equipments, drills, discipline and recitations. All Cadets whose homes are not in the village will room in the Barracks, and board at the mess hall.

Day Cadets will be present for duty every day at eight o'clock, A. M., and will remain at the College until dismissed—with the necessary intermission for dinner. The President will not be responsible for the conduct of any Day Cadet between the time when he is dismissed from duty and until he again reports. But any conduct of a Day Cadet likely to disgrace the uniform, or bring the College into disrepute, will lead to summary punishment. Day Cadets will not be allowed to go to the College evenings or on Sundays, after inspection.

No student will be allowed to contract debts, or buy anything on credit, without an order from the President.

A report of each Cadet's standing will be sent to his parents or guardians at the end of each month.

If parents or guardians so desire, the President will take charge of the pocket money of Cadets and issue the same, rendering an itemized account of the expenditures.

EXPENSES.

The charge in gross for Tuition, Board, Washing, Fuel, Lights, including Room Rent, is at the rate of $300.00 per accademic year. Washing means 1 1-2 dozen per week; extra washing 60 cents per dozen; extra charge will be made for pantaloons, white vests, coats and other heavy articles. Fuel means four cords of good wood to each room; more will be furnished, if desired, at cost; but experience has proved this amount to be amply sufficient, if judiciously used.

ɔcial deposit of $25.00 will be made with the President at the be-
ɔf each year. From this amount will be made all purchases of
ıtationery, and other necessary articles, to be accounted for at
e of the year.
per year will be charged for the use of arms and equipments.
per year will be charged for the use of the books in the Libra-
amount so collected to be used strictly in replenishing the same.
y to the property of the College by a Cadet will be repaired at
ɛnse; but the cost of repair will be equally assessed upon the
rs of the Corps if the perpetrator be unknown.
ırising from medical attendance, medicine and nursing, will be

ts who are appointed musicians, will have their tuition and
ɪnt remitted.
ts rooming alone will be charged $20 per year extra.
are payable by the Term, strictly in advance. If any student
he Institution before the closing of the Term for which he has
r any sufficient reason other than suspension or expulsion, the
: justly due him for the unexpired time will be remitted.
ld any deserving person of straightened means seeking an edu-
lesire information as to special terms, he will communicate with
ident.
py of the Regulations may be had by sending a ten cent postage
o the President.

CALENDAR.

COMMENCEMENT, June 27, 1878. Vacation 9 weeks.

FALL TERM begins August 29th, 1878; ends November 28th. Vacation 5 weeks

WINTER TERM begins January 2d, 1879; ends March 27th. Vacation 1 week.

SPRING TERM begins April 3d, 1879; Ends COMMENCEMENT, June 26th. Vacation 9 weeks.

On the Thursdays beginning each term, at *Retreat*, the bugle will sound for duty. If parents could but realize the importance of punctuality, and nerve themselves to say *no* to the pleas that "nothing will be done before Monday," not one Cadet would be absent, unless detained by *real* sickness.

Failure to report at the specified time will tell against a Cadet's standing, whether excused or not.

Cadets will not be allowed to leave Northfield during the term time, unless the President thinks it necessary, and he reserves the right to be sole judge in the premises.

CIRCULAR

OF THE

Norwich University

SCIENTIFIC

AND

Military College,

NORTHFIELD, - VERMONT.



WEST RANDOLPH, VT.
THE HERALD AND NEWS
1880





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Capt. GEORGE W. HOBBS, Uxbridge, Mass.



Norwich University.

THE MILITARY COLLEGE is situated near the center of the State of Vermont, in the quiet and attractive village of Northfield, where comparatively few temptations invite to idleness and dissipation. The location is pleasant, easy of access by means of the Central Vermont railroad, and very healthy.

THIS COLLEGE, by her works for nearly forty-five years and more especially during the late war, by her extraordinary contribution to the Army of twelve General Officers, forty colonels, and a host of educated officers of the lower grades, has earned a title to the generous confidence of the public.

THE COURSE OF INSTRUCTION embraces the usual studies of a good scientific education, while her charter makes Civil Engineering and Military Science a distinguishing feature.

HER SYSTEM OF MILITARY DISCIPLINE is specially designed to form habits of responsibility, promptness, subordination and order. The drills and exercises form an excellent gymnasium, and contribute greatly to health, strength and the best physical developement, to a self-possessed and easy manner, and a courteous and manly bearing.

THE DAILY ROUTINE, with its regular morning and evening hours, its Drum-Beats and Bugle Calls, Reveille, Retreats, Tattoo and Taps; with its orderly march to Recitation and Meals, its Drills, its Roll Calls, its Reports; with its uniform dress, established discipline, impartial government, and punctilious regard to respectful deportment and self-control in all official relations, strongly encourages the formation of regular habits and scrupulous attention to duties. It cherishes a sense of honorable responsibility in the discharge of trust; and, as experience uniformly shows, has a most wholesome influence upon health and morals.

The whole training, physical, intellectual and moral, has for its object to develope a sound mind in a sound body, and to educate our youth to be active, healthy, good and useful citizens in this great Republic.

To all those who desire for their sons, or wards, a right training of the head and heart, and desire also to unite with it the Physical and Moral benefits of a THOROUGH MILITARY EDUCATION, DISCIPLINE AND DRILL, under the most favorable circumstances, and with surroundings of the most wholesome influence, the MILITARY COLLEGE presents her claims.

Requirements for Admission.

All candidates for admission to the Freshman Class must be at least fifteen years of age, and must present satisfactory evidence of good moral character.

Candidates will be examined in the following studies:

MATHEMATICS.—Arithmetic; Algebra, through simple equations; Geometry, four books of Davies' Legendre, or its equivalent.

ENGLISH LANGUAGE.—Grammar. Composition, with special attention to punctuation and the use of capitals.

GEOGRAPHY.—Physical and Political Geography.

HISTORY.—History of the United States.

LATIN.—Allen and Greenough's or Harkness' Latin Grammar and Latin Prose Composition. Cæsar's Commentaries, books I–III. six orations of Cicero. six books of Virgil's Æneid.

Graduates from High-Schools may enter without examination, and their ability to continue in the course will be determined by the examination at the close of the first term.

NOTE.—*Students who do not elect Latin through the course, are not required to be examined in it.*

ADVANCED STANDING.

Candidates for advanced standing will be examined in all the previous studies of the course, and if they come from another institution will present certificates of honorable dismission.

SPECIAL STUDIES.

Candidates not applicants for a degree will be allowed to go into any class for which they are fitted, and pursue a special course.

Students who are not fully prepared to enter the regular course will be admitted without examination and can pursue the study of such branches as will enable them to take a good standing in the first year's course.

BUSINESS COURSE.

Cadets who intend to go into business after graduating will be allowed to substitute the study of Commercial Law, Book-Keeping, and kindred studies, for such other branches as the Faculty may decide.

On the Thursdays beginning each term, at *Retreat*, the bugle will sound for duty.

Failure to report at the specified time will tell against a Cadet's standing, whether excused or not.

Cadets will not be allowed to leave Northfield during the term time, unless the President thinks it necessary, and he reserves the right to be the sole judge in the premises.



Course of Study.

FIRST YEAR.

MATHEMATICS:
- ALGEBRA, - - *Davies' Bourdon.*
- GEOMETRY. - - *Davies' Leyendre.*
- TRIGONOMETRY: Plane; Analytical and Spherical, - - - *Davies.*

FRENCH: Grammar. - - - - - - - *Otto.*
LATIN: Livy, Horace, Harkness' Latin Prose Composition.
HISTORY: American.
COMPOSITION AND ELOCUTION.
DRAWING: Free Hand and Geometrical.
MILITARY INSTRUCTION: Infantry Drill, Sword and Bayonet Exercise.

SECOND YEAR.

MATHEMATICS:
- SURVEYING: Theory and Practice with chain and compass. - *Davies.*
- DESCRIPTIVE GEOMETRY: Plane Problems; Tangent Planes; Intersection of Solids; Spherical Projection. - - - - - - *Church.*
- SHADES AND SHADOWS: Theory and Drawing, - - - - *Church.*
- LINEAR PERSPECTIVE: - - "
- ISOMETRIC PERSPECTIVE - - "
- ANALYTICAL GEOMETRY: Equations of Lines; Conic Sections. - *Davies.*

COMPOSITION AND ELOCUTION:
FRENCH: Grammar; Composition.
PHYSICS: Chemistry and Analytical Chemistry. *Youman.*
HISTORY.
DRAWING: { LINE SHADING. USE OF INSTRUMENTS. / BINN'S ORTHOGRAPHIC PROJECTIONS. / PROJECTION OF SHADOWS & PERSPECTIVE.
MILITARY INSTRUCTION: Infantry Drill; Sword and Bayonet Exercise; Lectures on the Customs of Service.

THIRD YEAR.

MATHEMATICS: CALCULUS, Differential and Integral. [*Buckingham.*
MECHANICS: Of Solids, Liquids and Gases, and their application in practical results. - - *Peck's University.*
NATURAL PHILOSOPHY: Acoustics and Optics, *Bartlett.*
LOGIC. - - - - - - - - - *Whately.*
RHETORIC. - - - - - - - - - *Haven.*
POLITICAL ECONOMY. - - - - - - *Perry.*
HISTORY.
ZOOLOGY.—Elective.
BOTANY.—Elective.
GERMAN: Grammar; Translation from English into German; Schiller's Wilhelm Tell.
SHAKESPEARIAN READING AND CRITICISM.
COMPOSITION AND ELOCUTION.
DRAWING: { Shading and Tinting; Machine Drawing, including Bridge Drawings. / Topography; Field Practice and Drawing.
MILITARY INSTRUCTION: Infantry and Artillery Drill; Guard and Out-post duty; Lectures on Military Subjects.

FOURTH YEAR.

ASTRONOMY: PHYSICAL and SPHERICAL, and its Nautical application in establishing latitude and longitude. [*Bartlett.*
CIVIL ENGINEERING: { THEORY; Roads; Bridges; Tunnels; Canals; Strength of Material; Leveling and Railroad Curves. - *Mahan.* / PRACTICAL OPERATIONS; Use of Level and Theodolite; Leveling for Section and Working Drawings. [*Simms.*
GEOLOGY. - - - - - - - - - *Dana.*
MINERALOGY. - - - - - - - - - *Dana.*
STUDIES IN ENGLISH LANGUAGE AND LITERATURE.
CONSTITUTIONAL LAW.
INTERNATIONAL LAW.

GERMAN: Grammar; Syntax; Göethe's Herman an Dorothea; Schiller's Marie Stuart, Conversational Ex ercises.
DRAWING: Architectural.
MILITARY INSTRUCTION: Artillery Drill; Signals; Mili tary Telegraph; Cyphers; Fencing; Art of War; Man nal for Engineer Troops.

DEGREES.

The Degree of BACHELOR OF SCIENCE is conferred up on students who complete the course, and pass a satisfac tory examination in the same.

The Degree of MASTER OF SCIENCE will be conferre upon graduates of three years standing, who shall have engaged during that time in professional, literary, or sci entific pursuits.

The Degree of CIVIL ENGINEER will be conferred upon Graduates of three years standing, who shall have pur sued the profession of an Engineer during that time.

Miscellaneous.

Academic standing depends upon recitations; Military standing upon marks of Merit or Demerit. Immoralties, technical and minor offences, are marked with demerits, and are punishable in other ways. Wherever purely academic duties require variation in special matters the analogies of Military usage are maintained, so far as practicable.

The students are called Cadets, and are under military discipline. The commissioned and non-commissioned officers are appointed from the Senior Class, in the order of merit and soldierly bearing. The Seniors and Juniors act in rotation as Officers of the Day. Every Cadet is required to wear the uniform of the College during term time. The Cadets are instructed theoretically and practically in Infantry and Artillery Tactics and Drill, Bayonet and Sword Exercise, Fortification, Reconnoisance, Castrematation, and in Guard and Out-post Duty.

UNIFORM.

A single-breasted Dress Coat of dark blue cloth, College buttons; Trousers, dark blue, with light blue stripe; Black Cravat; U. S. Shako, with usual gilt ornaments, red and white pompon; Forage Cap; Boots or high Shoes, of black unglazed leather. The Commandant can furnish accurate directions for the tailor's use, if desired. The uniform can doubtless be better made, and more cheaply, by the College tailor at Northfield than elsewhere. A reasonable time is allowed the newly admitted Cadet for wearing out the old suit, and procuring the new Uniform.

All students should come well supplied with sheets, blankets, pillow cases, towels, napkins, and toilet articles.

Every article of clothing for the Laundry must be plainly marked with full name. Articles with no name, or name nearly illegible, will not be received at the Laundry.

PUBLIC WORSHIP.

Prayers are held before the opening of academic exercises on each week-day morning, at 8 o'clock. Upon Sunday morning every Cadet is required to attend divine service with some one of the village congregations, the choice being made at the beginning of the term by the Cadet himself, if of age, or otherwise by his parent or guardian, and adhered to throughout the term. The village societies to which the choice is thus limited are Episcopal, Roman Catholic, Universalist, Congregrtionalist and Methodist.

ADMISSION, DUTIES, ETC.

Candidates for admission will report promptly to the President, and sign the rules and regulations of the College.

All Cadets will pursue the regular course of study, as heretofore laid down; and all will be equally subject to the regulations in regard to uniform, equipments, drills, discipline and recitations. All Cadets whose homes are not in the village will room in the Barracks.

Day Cadets will be present for duty every day at eight o'clock, A. M., and remain at the College until dismissed--with the necessary intermission for dinner. The President will not be responsible for the conduct of any Day Cadet from the time when he is dismissed from duty, until he again reports. But any conduct of a Day Cadet likely to disgrace the uniform, or bring the College into disrepute, will lead to summary punishment. Day Cadets will not be allowed to go to the College evenings, or on Sundays after inspection.

A report of each Cadet's standing will be sent to his parents or guardians at the end of each month, if required.

EXPENSES.

Tuition including room rent per term	$25.00
Use of Library	.50
Incidentals, &c.	.50

Board may be obtained in the village at from $2 to $5.00 per week. Washing and fuel at reasonable rates.

Those wishing board at the University Mess Hall will be charged for Tuition, Board, Washing, Fuel and Lights at the rate of $225 00 per year. Washing means 1 1-2 dozen per week; extra washing 50 cents per dozen; extra charge made for pantaloons, white vests, coats and other heavy articles. Fuel means two cords of good wood to each student; more will be furnished, if desired, at cost, but experience has proved this amount to be amply sufficient if carefully used.

Injury to the property of the College by a Cadet will be repaired at his expense; but the cost of repair will be equally assessed upon the members of the Corps if the perpetrator be unknown.

Cadets who are appointed musicians, will have their tuition and room rent remitted.

Cadets rooming alone will be charged $20 per year extra.

Bills are payable by the Term, strictly in advance. If any student leaves the Institution before the closing of the Term for which he has paid, for any sufficient reason other than suspension or expulsion, the amount justly due him for the unexpired time will be remitted.

Should any deserving person of straightened means seeking an education desire information as to special terms, he will communicate with the President,

The Central Vermont Railroad allows half fare.

For further information address,

W. M. RUMBAUGH, COMMANDANT.

CALENDAR.

FALL TERM begins September 2, 1880; ends December 2.

VACATION FOUR WEEKS.

WINTER TERM begins December 30, '80; ends March 24, '81.

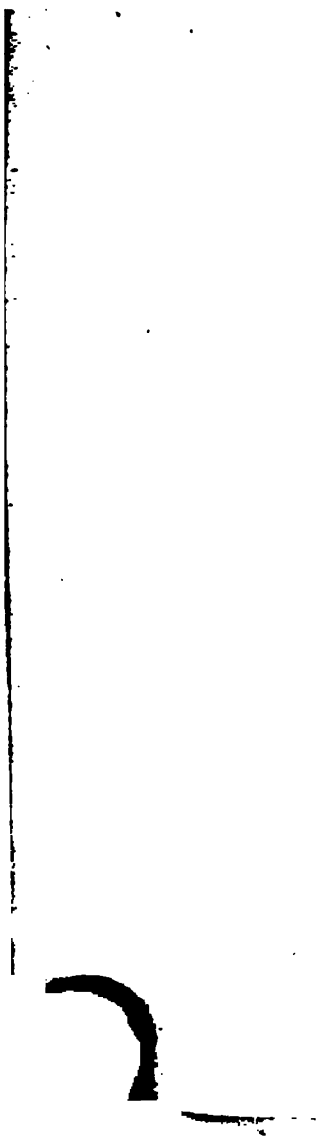
VACATION TWO WEEKS.

SPRI[illegible]gins Apr. 7, '81; ends Commencement June 30.

LEWIS COLLEGE.



1881-82.



PROSPECTUS

OF

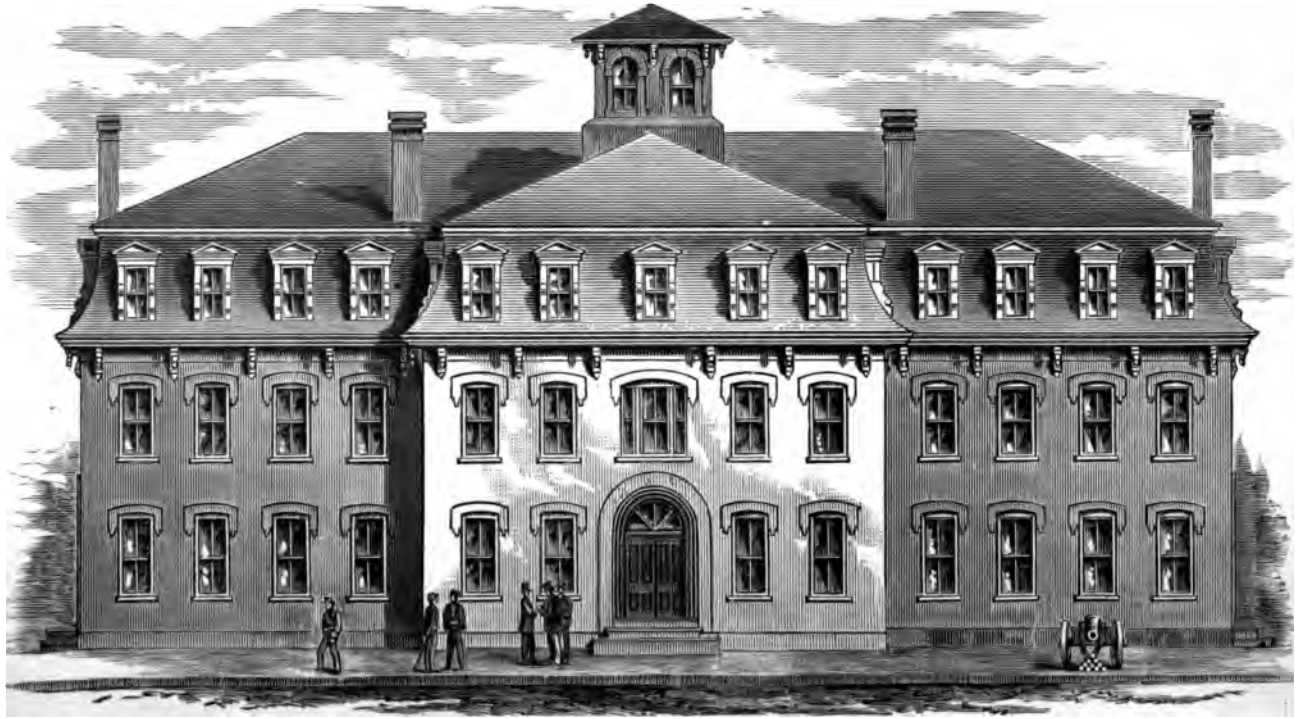
LEWIS COLLEGE,

NORTHFIELD, VT.

1881-82.



BOSTON:
GUNN, BLISS & CURTIS, PRINTERS, 31 HAWLEY STREET.
1881.



CADET BARRACKS.

INTRODUCTION.

LEWIS COLLEGE IS A NEW NAME FOR THE OLD NORWICH UNIVERSITY, VT., INCORPORATED IN 1834.

ENDOWMENT.

The changing of the name was an act of the Trustees, in honor of Col. Charles H. Lewis, LL.D., an alumnus, who gives to his *alma mater* a large endowment. Aside from this endowment, he proposes soon to erect new and extensive buildings; to supply the museum with minerals and specimens from every State and Territory in the Union; to purchase new apparatus for laboratory work in Chemistry, Physics and Metallurgy.

NEW COURSES OF INSTRUCTION.

By the conditions of the charter, Civil Engineering and Military Science are made distinguishing features. In addition to the usual courses in the classics and sciences formerly pursued, and the new course laid down in Science and Literature, three distinctly professional courses are introduced, — one in Mining Engineering, one in Chemistry and Physics, and one in Metallurgy.

PRACTICAL EDUCATION.

It is the aim of this College, not only to give accomplishments in art, but, also, to furnish sound, practical instruction in the industrial sciences, and thus fit young men for the business and industrial pursuits of life. She aims to graduate students competent to fill positions as civil engineers, mining engineers, professional chemists and assayers, for which there is a rapidly growing demand in this and other American countries. Accordingly, in those branches of learning relating to industrial pursuits, liberal provision is being made for instruction. The studies in all departments will be made as practical as possible.

SPECIAL PRIVILEGES.

The student has the privilege to make his selection from the several courses carefully arranged, or pursue an entirely independent course, subject to the approval of the Faculty. This liberty of choice in the variety of instruction enables him to enter at once upon the acquisition of that knowledge and discipline which will best promote his life-work, in accordance with his taste and aspirations.

Those whose ulterior object is the study of law, can elect studies in Political Science; and those having in view the medical profession will have special opportunities for the study of Anatomy, Physiology and Chemistry.

Special students may enter the College for a longer or shorter time, and pursue any branch of study they may select.

MILITARY FEATURE.

The discipline of the College is entirely ***military***. Study hours, roll-calls, military duties, and the details of military usage are strictly observed.

The *art and science of war* is studied to as great an extent as it can be in an independent military college.

The regular systematic military exercises tend to the formation of prompt and orderly habits, and contribute greatly to health, strength, and the best physical development; to a self-possessed and easy manner, and a courteous and manly bearing.

The daily routine, with its regular morning and evening hours, its drum-beats and bugle-calls, reveille, retreats, tattoo and taps; with its orderly march to recitation and meals, its drills, its roll-calls, its reports; with its uniform dress, established discipline, impartial government, and punctilious regard to respectful deportment and self-control in all official relations, strongly encourages the formation of regular habits and scrupulous attention to duties. It cherishes a sense of honorable responsibility in the discharge of trust; and, as experience uniformly shows, has a most wholesome influence upon health and morals.

RELIGIOUS FEATURE.

This Military College, for the investigation and study of Philosophy, Science and Art, under a government which recognizes no distinctions in religious belief, should be, and is, non-sectarian, as its founders wisely determined. While every effort will be made to inculcate high moral and deep religious principles, nothing will be taught intended to bias the mind of the student, either for or against any creed; nor will any one receive any special privileges or favors, or be excluded from any offices or honors on account of his religious views. Proper respect for religious observances and regard for Christian morals will be required of all.

LOCATION.

The location of Lewis College is a good one, it being at Northfield, which is at the centre of the State of Vermont, and easy of access by means of the Central Vermont Railroad. It is up among the Green Mountains, surrounded by beautiful natural scenery, and a pure, healthful, invigorating atmosphere, over-looking a fine country village composed of enterprising, moral and temperate citizens, and is comparatively free from the seductive temptations and evil influences which beset students in large cities.

CORPORATION.

PRESIDENT:

Col. CHARLES H. LEWIS, LL.D., New York City.

SECRETARY:

Col. FRED. E. SMITH, Montpelier, Vt.

TREASURER:

J. C. B. THAYER, Esq., Northfield.

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Col. KITTREDGE HASKINS,	Brattleboro.
JAMES A. L. WHITTIER, Esq.,	Boston, Mass.
CHARLES H. REED, Esq.,	Boston, Mass.
Maj. HENRY E. ALVORD,	East Hampton, Mass.
Col. FRED. E. SMITH,	Montpelier.
JOSEPH STEDMAN, M.D.,	Boston, Mass.
THOMAS H. CANFIELD, Esq.,	Burlington.
Capt. CHARLES A. CURTIS,	Northfield.
Rev. THOMAS J. TAYLOR,	Windsor.
Hon. WHEELOCK G. VEAZEY,	Rutland.
Col. CHARLES H. LEWIS, LL.D.,	New York City.
Capt. GEORGE W. HOBBS,	Uxbridge, Mass.
CLARENCE L. HATHAWAY, M.D.,	Boston, Mass.

FACULTY.

Col. CHARLES HILDRETH LEWIS, LL.D. . *New York City.*
PRESIDENT.

CLARENCE LOCKWOOD HATHAWAY, M.S., M.D.
Boston, Mass.
VICE PRESIDENT—Professor of Anatomy, Physiology, and Hygiene.

CHARLES DOLE, A.M. *Northfield.*
Professor of English, History, and Political Science.
SECRETARY OF THE FACULTY.

WILLIAM MOSER RUMBAUGH, C.E. . . *Northfield.*
Professor of Drawing, Architecture, Civil and Topographical Engineering.

REV. FRANKLIN WESTON BARTLETT, A.M. . *Northfield.*
Professor of Latin and Greek.

JOHN BENJAMIN JOHNSON, A.B. . . . *Northfield.*
Professor of Mathematics, Mining and Mechanical Engineering.

FREDERICK WILLIAM GRUBÉ, A.M. . . *Northfield.*
(Late of Universities of Dublin, Bonn and Paris.)
Professor of Modern Languages.

ASA HOWE, M.D., C.E. *Northfield.*
Professor of Engineering, Field Work.

——— ———
Professor of Physics, Chemistry and Metallurgy.

* ——— ———
Professor of Military Science and Tactics.

PHILANDER DRURY BRADFORD, A.M., M.D. . *Northfield.*
Lecturer in Natural History.

HIRAM ADOLPHUS CUTTING, A.M., M.D., Ph.D. *Lunenburgh.*
STATE GEOLOGIST OF VERMONT.
Lecturer in Natural Science.

THOMAS ALVA EDISON, Ph.D. . *Menlo Park, New Jersey.*
Lecturer on Electricity and Sound.

MAJ.-GEN. JUDSON KILPATRICK, . . . *New Jersey.*
Lecturer on the Art of War, and Military Law.

GEORGE NATHANIEL CARPENTER, A.B. *Boston, Mass.*
Lecturer on Commercial Ethics.

* This Chair is at present filled by Prof. Rumbaugh.

MILITARY STAFF.

COL. CHARLES H. LEWIS,
Commandant.

CAPT. WILLIAM M. RUMBAUGH, N.G.V.,
Commandant of Cadets.

LIEUT. CHARLES DOLE, N.G.V.,
Quartermaster.

LIEUT. JOHN B. JOHNSON, N.G.V.,
Adjutant.

PHILANDER D. BRADFORD,
Surgeon.

REV. F. W. BARTLETT,
Chaplain.

JAMES EVANS,
Armorer.

REQUIREMENTS OF ADMISSION.

All candidates for admission to the College must be at least fifteen years of age, and must present satisfactory evidence of good moral character.

TO THE COURSES IN SCIENCE AND CIVIL ENGINEERING, MINING ENGINEERING, CHEMISTRY AND PHYSICS, METALLURGY, SCIENCE AND LITERATURE.

Candidates will be examined in the following studies:

Mathematics. — Arithmetic; Algebra, through simple equations; Geometry, four books of Davies' "Legendre," or its equivalent.

English Language. — Grammar; Composition, with special attention to punctuation and the use of capitals.

Geography. — Physical and Political Geography.

History. — History of the United States.

Latin. — Allen and Greenough's, or Harkness' Latin Grammar and Latin Prose Composition; Cæsar's "Commentaries," books 1–3, or their equivalents.

Or, in place of Latin, the candidate may offer —

French. — Grammar; translation of French at sight; the translation of English into French.

Or, *German.* — Grammar; translation of German at sight; the translation of English into German.

Or, *Advanced Mathematics* — such as may be acceptable to the Faculty.

Graduates from high schools will be admitted without examination, and their ability to continue in the course for which they enter will be determined by the examination at the close of the first term.

Candidates not fully prepared in all the requirements, may be conditioned, and special assistance will be given them by the Professors in making up the deficiencies.

TO THE COURSE IN ARTS.

In addition to the examinations in Mathematics, English Language, Geography and History, laid down for the courses in Science, examinations will be as follows:

Latin. — Cæsar's "Commentaries," four books, or Salust's "Catiline;" Virgil's "Ænead," six books; Cicero, four orations.

Greek. — Xenophen's "Anabasis," four books, or one hundred pages Goodwin's Greek Reader; Homer's "Iliad," two books.

ADVANCED STANDING.

Candidates for advanced standing will be examined in all the previous studies of the course; and if they come from another institution, will present certificates of honorable dismission.

SPECIAL STUDIES.

Candidates not applicants for a degree, will be allowed to go into any class for which they are fitted, and pursue a special course.

COURSES OF INSTRUCTION.

Six regular courses have been established, as follows:

I. *A Course in Science and Civil Engineering.*
II. " " " *Mining Engineering.*
III. " " " *Chemistry and Physics.*
IV. " " " *Metallurgy.*
V. " " " *Science and Literature.*
VI. " " " *Arts.*

The first four of these have a distinctly practical bearing, and give a thorough training for most of the scientific professions. The one in Metallurgy has particular reference to the production and working of the metals.

The course in Science and Literature is established for such as may not wish to pursue the full course in Mathematics, or that for a distinctly scientific profession, and is designed to furnish a liberal preparation for business pursuits.

The course in Arts, or full Classical course, answers to the usual academic course of American colleges.

Each of these courses extends through four years, and is intended to give to the student a liberal culture.

The Spanish language is elective, and will be taught in special classes in the third and fourth years, for the benefit of those who may expect to have business or professional relations with Spanish-speaking countries.

An Elective Course requires an amount of study equivalent to that prescribed in any of the others.

It is proposed, as soon as practicable, to establish two additional courses, viz.: one in Architecture, and one in Natural History.

REGULAR COURSES.

ALL COURSES EXCEPT IN ARTS.

FIRST YEAR.

Algebra ; Geometry ; Trigonometry, plane and spherical ; General Chemistry ; French, German or Latin ; Rhetoric ; History, Greece and Rome ; Drawing, free-hand and geometrical ; Military Instruction, infantry drill, and sword and bayonet exercise.

I. SCIENCE AND CIVIL ENGINEERING.

(Leading to the Degrees of B.S. and C.E.)

SECOND YEAR.

Analytic Geometry ; Descriptive Geometry ; Differential Calculus ; Surveying, theory and practice ; Leveling, field practice ; Shades and Shadows, theory and drawing ; Perspective and Topography ; French or German ; Composition and Elocution ; Military Instruction, infantry drill, sword and bayonet exercise, and lectures on the customs of the service.

THIRD YEAR.

Integral Calculus ; Mechanics of solids, fluids, gases and molecules, practical appliances ; Geology, structural, dynamical and historical ; French or German ; Logic ; Commercial Law ; Constitutional History ; Topography, field practice and drawing ; Lectures on Anatomy and Physiology; Military Instruction, infantry and artillery drill, guard and out-post duty, and lectures on military subjects.

FOURTH YEAR.

Natural Philosophy, acoustics and optics; Astronomy, descriptive, physical and spherical; Hydrography, machine drawing and structural drawing; Civil Engineering, theory, roads, bridges, tunnels, canals, strength of material, practical operations, use of level and theodolite, Leveling for Section and Working; Architecture, drawings; French or German; Lectures on Hygiene; Political Economy; Constitutional Law; Thesis Work; Military Instruction, infantry and artillery drill, art of war, and engineering.

II. MINING ENGINEERING.

(Leading to the Degree of M.E.)

SECOND YEAR.

Analytic Geometry; Descriptive Geometry; Differential Calculus; Surveying, theory and practice; Drawing; Perspective and Topography; Physics, lectures; French or German; Composition and Elocution; Physical Geography; Qualitative and Quantitative Chemical Analysis, laboratory work; Blow-pipe Analysis; Crystallography and Determinative Mineralogy.

THIRD YEAR.

Integral Calculus; Mechanics, statics, dynamics and kinematics; Physics, lectures and laboratory work; Geology and Lithology; Quantitative Chemical Analysis; Mining Engineering; Assaying; Constitutional History; French or German; Lectures on Anatomy and Physiology.

FOURTH YEAR.

Mechanics completed; Hydrography, machine drawing and structural drawing; Building Materials; Mining Laboratory, work upon gold, silver, copper and other ores

in quantity ; Quantitative Chemical Analysis ; Metallurgy, lectures ; Ore-Dressing, lectures ; Political Economy ; Constitutional Law ; Thesis Work ; Lectures on Hygiene.

☞ Military Instruction throughout this course the same as that laid down in Course I.

III. CHEMISTRY AND PHYSICS.

(Leading to the Degree of B.S.)

SECOND YEAR.

Analytic Geometry ; Descriptive Geometry ; Differential Calculus ; Physics, lectures ; Drawing ; French or German ; Physical Geography ; Qualitative and Quantitative Analysis, lectures and laboratory work ; Blow-Pipe Analysis ; Crystallography and Determinative Mineralogy ; Composition and Elocution.

THIRD YEAR.

Integral Calculus ; General Physics, Optics and Acoustics ; Chemical Philosophy ; Quantitative Analysis, laboratory work ; Industrial Chemistry ; Physical Laboratory ; French or German ; Constitutional History ; Lectures on Anatomy and Physiology.

FOURTH YEAR.

Applied Mechanics ; General Physics ; Electricity ; Acoustics and Optics ; Organic Chemistry ; Chemical Laboratory, chemical application of physics ; Metallurgy ; Principles of Scientific Investigation ; Political Economy ; Constitutional Law ; Thesis Work ; Lectures on Hygiene.

☞ Military Instruction throughout this course the same as that laid down in Course I.

IV. METALLURGY.

(Leading to the Degree of B.S.)

SECOND YEAR.

Analytic Geometry; Descriptive Geometry; Physics; Qualitative and Quantitative Analysis; Blow-pipe Analysis; Crystallography and Determinative Mineralogy; Physical Geography and Dynamical Geology; Drawing; French or German; Composition and Elocution.

THIRD YEAR.

Chemical Philosophy; Physics; Quantitative Analysis; Industrial Chemistry; Lithology and Geology; Historical Geology; Assaying; Drawing; French or German; Constitutional History; Lectures on Anatomy and Physiology.

FOURTH YEAR.

Metallurgy and Ore-Dressing; Metallurgical Laboratory, work upon gold, silver, copper and other ores in quantity; Quantitative Analysis, laboratory work; Drawing; Building Materials; Applied Physics; Political Economy; Thesis Work; Lectures on Hygiene.

☞ Military Instruction throughout this course the same as that laid down in Course I.

V. SCIENCE AND LITERATURE.

(Leading to the Degree of B.S.)

SECOND YEAR.

Analytic Geometry; Descriptive Geometry; Surveying, theory and practice; German, French or Latin; English History and Literature; Leveling, field practice; Drawing, shades and shadows; Perspective and Topography.

THIRD YEAR.

French or German ; Logic ; Constitutional History ; Geology ; Commercial Law ; International Law ; History of the Roman Empire ; Physics ; Composition and Elocution ; Lectures on Anatomy and Physiology

FOURTH YEAR.

French or German ; Political Economy ; Mediæval and Modern History ; Literature and Oratory ; Constitutional Law ; History of Philosophy ; Philosophy of History ; Thesis Work ; Lectures on Hygiene.

☞ Military Instruction throughout this course the same as that laid down in Course I.

VI. COURSE IN ARTS.

(Leading to the Degree of A.B.)

FIRST YEAR.

Greek ; Latin ; Geometry ; Algebra ; Trigonometry ; General Chemistry ; Free-Hand and Geometrical Drawing ; Composition and Elocution.

SECOND YEAR.

Greek ; Latin ; Analytic Geometry ; Surveying, theory and practice ; English History and Literature ; Leveling, field practice ; Drawing ; Perspective and Topography.

THIRD YEAR.

[Greek and Latin, elective] ; French or German ; Geology ; Logic ; Physics ; [elective — Constitutional History, Commercial Law, International Law, History of the Roman Empire] ; Composition and Elocution ; Lectures on Anatomy and Physiology.

[Greek and Latin, elective]; French or German; Political Economy; Constitutional Law; [elective — Literature and Oratory, Constitutional Law, Mediæval and Modern History; History of Philosophy; Philosophy of History;] Thesis Work; Lectures on Hygiene.

☞ Military Instruction throughout this course the same as that laid down in Course I.

DEGREES.

The time required for any full course leading to a Degree is four years. Students can enter in advance by passing satisfactory examinations in the studies already gone over by the class they propose to enter, and those required for admission.

The candidate for any Degree must deposit with the Faculty a satisfactory thesis on some scientific or literary study connected with his department.

DEGREES ON GRADUATION.

The Degree of Bachelor of Science may be conferred upon any student who has completed any one of the following courses: Science and Civil Engineering, Science and Literature, Chemistry and Physics, and Metallurgy, and shall have passed the required examinations.

The Degree of Bachelor of Arts may be conferred upon any student who has satisfactorily completed the course in arts.

The Degree of Mining Engineer will be conferred only after the satisfactory completion of the full course in that department.

ADVANCE DEGREES.

The Master's Degree in Science or Arts is conferred upon graduates of this College of three years' standing, who have taken the corresponding Bachelor's Degree, and who, during that time shall have been engaged in professional, literary or scientific pursuits, or have pursued a course marked out by the Faculty for one year after graduation, and passed the examinations.

The Degree of Civil Engineer may be conferred upon graduates in Science and Civil Engineering of two years' standing, who have pursued the profession of an engineer during the time, and passed the requisite examinations ; or upon cadets who satisfactorily complete an additional year's study.

GRADES.

The grades are determined with the greatest care and accuracy, and, as shown in the Merit Roll of the classes, give a correct and comprehensive view of the conduct and scholarship of the cadets.

One hundred is the normal grade in each department of study and conduct, and its retainment implies perfectness in the cadet. This grade is lowered by violation of rules, deficient scholarship, or neglect of duty, in proportion to the gravity of the offence.

When, in any department, the grade of a cadet falls to zero, he is, *ipso facto*, dismissed from the College.

The Grade of Honor is conferred upon the six cadets whose names have been reported to the Trustees for excellence in all departments.

DAILY ROUTINE OF DUTY.

FORENOON.

First call for Reveille, 6:05 ; Reveille, 6:15.

Inspection of Quarters by Officer of the Day, to see that the rooms are swept and in good order, furniture dusted, slops emptied and beds made up, at 6:40.

Breakfast-call, 6:40 ; Breakfast, 6:45.

First call for Prayers, 7:55 ; Prayers, 8.

Study-hours and Recitations, from close of Prayers, until 12.

Dinner-call, 12:05.

AFTERNOON.

First call for afternoon Roll-call, 1:10 ; Roll-call, 1:15.

Study-hours and Recitations, from 1:15 to 3:45.

First call for Drill, 4.

Inspection by Company Commanders, to see that rooms are in order, slops emptied, etc.

Drill, 4:10.

Recall from Drill and first call for Supper, 5:10 ; Supper, 5:15.

Recreation, from Supper until Retreat.

First call for Retreat, 5 minutes before sunset, except when the sun sets before 7 ; then, at 6:55.

Retreat, at sunset, except when the sun sets before 7 ; then, at 7. When Retreat occurs at 7, Call-to-Quarters will sound 15 minutes afterwards ; at other times, cadets will disperse to their rooms immediately from Retreat.

Study-hours, from Call-to-Quarters until Tattoo.

Tattoo, 9:30, from March 21st to September 21st ; and 9, from September 21st to March 21st, first call sounding 5 minutes before.

Taps, 30 minutes after Tattoo, followed by an inspection by the Officer of the Day, who will see that all cadets are in quarters, lights out and fires secured.

On Fridays and Sundays, Retreat will take place at 6, and permits will be granted to leave quarters in the evening, for a limited time.

On Saturdays and Sundays, no 1:15 Roll-call or Recitations, except the literary exercises which follow Prayers on Saturday.

Sunday morning, no Chapel exercises. Inspection of Arms and Quarters, 9:30. Church-call, 10:20.

MISCELLANEOUS.

ACADEMIC YEAR AND RECESSES.

The College year begins the second Thursday in September, and closes the third Thursday in June. There will be a recess of two weeks, commencing the Thursday before Christmas, and one of one week, commencing the Thursday before Fast-Day.

STANDING, MILITARY CUSTOMS, ETC.

Academic standing depends upon recitations; Military standing, upon marks of merit and demerit, together with proficiency in military duties. Immoralities, technical and minor offences, are marked with demerits, and are punishable in other ways. Wherever purely academic duties require variation in special matters, the analogies of military usage are maintained, so far as practicable.

The students are called cadets, and are under military discipline. The commissioned and non-commissioned officers are appointed from the senior class, in the order of merit and soldierly bearing. The Seniors and Juniors act in rotation as Officers of the Day. Every cadet is required to wear the uniform of the college during term time. The cadets are instructed theoretically and practically in In-

fantry and Artillery Tactics and Drill, Bayonet and Sword Exercises, Fortification, Reconnoisance, Castrametation, and in Guard and Out-post Duty.

UNIFORM.

A single-breasted dress-coat of dark blue cloth, college buttons; trousers, dark blue, with light blue stripe; black cravat; U. S. shako, with usual gilt ornaments, red and white pompon; forage cap; boots, or high shoes of black, unglazed leather. The Commandant of Cadets can furnish accurate directions for the tailor's use, if desired. The uniform can doubtless be better made, and more cheaply, by the college tailor at Northfield, than elsewhere.

PUBLIC WORSHIP.

Prayers are held before the opening of academic exercises on each week-day morning, at 8 o'clock. Upon Sunday morning, every cadet is required to attend divine service with some one of the village congregations, the choice being made at the beginning of the term by the cadet himself, if of age, or, otherwise, by his parents or guardians, and adhered to throughout the term. The village societies to which the choice is thus limited are: Congregationalist, Episcopal, Methodist, Roman Catholic, and Universalist.

ADMISSION, DUTIES, ETC.

Candidates for admission will report to the Secretary of the Faculty, and sign the Rules and Regulations of the College.

All cadets will be equally subject to the regulations in regard to uniform, equipments, drills, discipline and recitations. All cadets whose homes are not in the village will

room in the Barracks, and board at the mess-hall, unless special permission be given to the contrary. The mess-hall is in charge of the Quartermaster, who will see that the table is well provided with the best the market affords.

A report of each cadets standing will be sent to his parents or guardians, at the end of each month, if required.

If parents or guardians so desire, some member of the Faculty will take charge of the pocket-money of cadets, and issue the same, rendering an itemized account of the expenditures.

EXPENSES.

The charge in gross for tuition, board, washing, fuel, lights, including room-rent, is at the rate of $300 per academic year (recesses not included).

The above charge is based on the supposition that two students occupy one room. If a student chooses to room alone, an additional charge of $30 per year will be made. Each room will be provided with stove and bedstead; in other respects students furnish their own rooms.

All students should come well supplied with sheets, blankets, pillow-cases, towels, napkins, and toilet articles.

Every article of clothing for the laundry must be plainly marked with full name. Articles with no name, or name nearly illegible, will not be received at the laundry.

Injury to the property of the College by a cadet will be repaired at his expense; but the cost of repair will be equally assessed upon the members of the corps if the perpetrator be unknown.

Cadets who are appointed musicians will have their tuition remitted.

Bills are payable semi-annually, strictly in advance, to the Secretary of the Faculty. If any student leaves the Institution before the closing of the term for which he has

paid, for any sufficient reason other than suspension or expulsion, the amount justly due him for the unexpired time will be remitted.

Should any deserving person of straightened means, seeking an education, desire information as to special terms, he will communicate with the President.

The Central Vermont Railroad allows half fare.

For further information address either the PRESIDENT, VICE PRESIDENT or SECRETARY, at *Northfield, Vermont.*



CADETS IN CAMP.

HISTORICAL SKETCH.

NOTES OF THE ALUMNI.

In 1819, the Superintendent of the United States Military Academy, Capt. Alden Partridge, resigned his commission at West Point to establish a military school at Norwich, Vt., his native town. As he was a man of great military ability, and recognized as an able and efficient officer, his school soon obtained celebrity, and, in a short time, hundreds of young men from different parts of the country were in attendance, uniformed, and organized as a corps of cadets.

This school was known as the American Literary, Scientific and Military Academy, until Nov. 6, 1834, when a charter of incorporation was granted it by the State of Vermont, under the name of the Norwich University. Thus was founded the first scientific, classical and military college in the Union. The charter gives full power to confer all such degrees, diplomas, honors or licences as are usually conferred by colleges or universities, and makes requisite a continuous course of military instruction, the State furnishing arms and equipments.

At the first meeting of the Trustees, Dec. 2, 1834, Capt. Partridge was elected President of the University, which position he held till 1843. At the time of his resignation, the College was widely known and deservedly popular, and in his declining years he could look upon it, with pride and satisfaction, as the institution which he himself had reared, and in which he had faithfully labored for nearly a quarter of a century.

In 1843, Gen. Truman B. Ransom, an alumnus, assumed the Presidency of the University, and maintained its high reputation and popularity till, four years later, he resigned to take command of the Ninth New England Regiment, for the Mexican war. He fell, gallantly leading his men, at the storming of Chepultepec. (Maj.-Gen. T. E. G. Ransom, also an alumnus, who was killed in the late war, was his son.)

In 1850, Rev. Edward Bourns, LL.D., for several years professor in one of the English Universities, and one of the ripest scholars and ablest thinkers of his day, was elected President. Dr. Bourns held this office for fifteen years, then that of professor, till his decease in 1872. During his administration, Gen. Alonzo Jackman, LL.D., was Professor of Military Science and Mathematics, and the University enjoyed a period of great prosperity, maintaining a high rank among the best educational institutions of the day. Gen. Jackman occupied the chair of mathematics up to the time of his death, Feb. 24, 1879. He was a graduate of the University, and during his long connection with the Institution he refused many liberal offers to go elsewhere, so great was his love for his *alma mater*.

Under Presidents Maj. T. W. Walker, U. S. A., Rev. Roger S. Howard, D.D., Rev. Josiah Swett, D.D., Rev. Malcolm Douglas, D.D., Capt. C. A. Curtis, U. S. A., and Hon. George Nichols, M.D., all men of ability, the Institution has done valuable work in the cause of education.

Heavy losses by fire at Norwich, in March, 1866, caused the removal of the University, the following autumn, to Northfield, where extensive grounds were purchased, and a fine building was erected by the enterprising citizens of the town. Here, the same system of instruction and military discipline has been carried on, and enabled many young men to go forth and fill high positions in various walks of life. Some have already proved themselves able teachers and engineers.

This was the first institution in the country to lay down a purely scientific course of study, and, up to the time of the Rebellion, the only one which embraced in its curriculum thorough military, classical and scientific courses. By her works for nearly half a century, she has earned a title to the generous confidence of the public. She has contributed a large number of able officers to the army and navy, and, as special attention has always been given to civil engineering and military science, her graduates have become particularly distinguished as army officers and civil engineers, many having won distinction in the service of their country during both the Mexican war and the war of the Rebellion, some having risen to the foremost rank of military commanders.

When, in '61, the nation called for defenders, the graduates of Norwich University were sought for throughout the loyal States as officers, and the long list of names on her army-roll shows how nobly they responded. So generously did the under-graduates respond to the call upon the Institution, that for two years there was no commencement, all of the senior class and many from other classes having gone into the army.

In business and political life, in the learned professions, and in science and art, many of her alumni have been eminently successful, and honored the Institution

which sent them forth from her halls. In the list of the most eminent civil engineers of the country, we find the names of Gens. Dodge and Buel, Seymour and Wright, with other "N. U." men.

The Norwich University roll of honor contains the names of twelve general officers, forty colonels, and a host of officers of lower grades, brave men and true, a large number of whom laid down their lives that their country might live. Among the few of her sons who have been spared to come to her aid is Col. Charles H. Lewis, and because of his generous aid, the name of this institution, which has rendered such valuable service to the country, has been changed to Lewis College; and, at a meeting of the Trustees, Dec. 31, 1880, he was elected President.

Col. Lewis graduated in the class of '55, at the age of seventeen. Entering the army in 1861 as Captain, at the age of twenty-five he was made Brevet-Lieutenant-Colonel in the regular army. Since the war he has been extensively engaged in business, and his wide observation has shown him that the great want of our time is a broader and higher public education of the people, of a practical kind. To aid in supplying this want, he generously endows this Institution, not through his last will and testament, but in his lifetime, and, at the urgent request of the Trustees, has consented to take upon himself its executive management, and proposes to see such measures carried out as will insure its continued prosperity.

CHARTER.

An Act incorporating and establishing the Norwich University at Norwich, Windsor County, Vermont.

It is hereby enacted by the General Assembly of the State of Vermont that there be, and hereby is, a Seminary of Learning, instituted, established, and incorporated at Norwich, in Windsor County, by the name and style of the Norwich University, and that Messrs. Josiah Dana, Jedediah H. Harris, Silas H. Jennison, Caleb Keith, William Noble, David P. Noyes, Samuel C. Allen, John Wright, Joshua Stowe, Isaac N. Cushman, Jonathan P. Miller, William Sweatt, Hubbard H. Winchester, and Elijah Miller, shall be, and hereby are constituted a body corporate and politic, and together with eleven others, to be by them elected at their first meeting, shall hereafter be called and known by the name of "The Trustees of the Norwich University," and that by that name they and their successors shall, and may have perpetual succession, and shall and may be known in law, to plead and be impleaded, defend and be defended against; answered and be answered unto, and also to have, take, possess, acquire, purchase, or otherwise receive monies, lands, tenements, hereditaments, goods, chattels, or estate, to the amount of one hunded thousand dollars, and may grant, demise, lease, use, manage, or improve the same for the good and benefit of the said University, according to their discretion.

SEC. 2. It is hereby further enacted, that the said Trustees and their successors shall and may have a common seal, to serve and use for all causes, matters, and affairs of theirs and their successors, and the same may alter, or make anew as they think fit.

SEC. 3. It is hereby further enacted, that the said Trustees may, and shall at their first meeting, elect eleven other Trustees to fill up said board, also a President and Vice-President of said University; and a Secretary and Treasurer of the board, which said President shall also be an ex-officio member and President of the Board of Trustees.

SEC. 4. It is hereby further enacted, that there shall be a meeting of said Trustees, in one of the buildings of the Institution, on the Thursday next succeeding the third Wednesday of August, annually, and at such other time and place as they shall see cause to appoint, to consult, advise, and act in and about the affairs and business of said Institution; and at any time when it may be deemed necessary, the Officers of said Board may call special meetings thereof, by giving notice by letter to said Board, eight days previous to the time of said meeting. And at any meeting of said Board seven of its members shall constitute a quorum, which may legally transact any business proper for said Board to transact; and if the President, by reason of death, disability, or other cause, shall not attend such meeting of the Board, then the Vice-President of the University shall officiate as President pro tem of the Board; and said Trustees and their successors, in any of their meetings assembled as aforesaid, may fill any vacancy which may have occurred in their own body, or remove any of their members for misdemeanor, immorality, default, or incapacity, provided that seven of said corporation shall concur therein, and shall have power to appoint professors or instructors, and all such other officers and assistants as they shall find necessary and think fit to appoint, for the good management and promotion of said Institution, and them, or any of them, may remove at their discretion.

SEC. 5. It is hereby further enacted, that the Trustees aforesaid shall have and exercise government of said Institution, together with the care and management of all matters and affairs belonging thereto; and shall have power to make and establish all such reasonable and proper laws, rules and regulations, as may be necessary for governing, instructing, and education of the students, and the managing of said Institution, and the same may repeal and alter from time to time, as they may see fit, provided the same be not contrary to the constitution and laws of this State, or of the United States, and provided also that no rules, laws, or regulations of a sectarian character, either in religion or politics, shall be adopted or imposed, nor shall any student ever be questioned or controlled on account of his religious or political belief, by said Board or the Faculty of said Institution, or any of them,

either directly or indirectly; and said laws, rules and regulations shall be laid before the Legislature of this State, whenever required by that body, and may by them be disallowed, altered, or repealed.

SEC. 6. It is hereby further enacted, that the said Board shall be required to furnish at said Institution, constantly, a course of military instruction, both theoretical and practical, and also of civil engineering, and the practical sciences generally. And the President of said Institution, with the consent of the Trustees, shall have power to give and confer all such diplomas, degrees, honors, or licenses, as are usually given or conferred in colleges or universities, at their discretion, provided, however, that in so doing they shall have respect to the morals and merits of the candidate alone.

SEC. 7. It is hereby further enacted, that the persons of the president, vice-president, professors, instructors, or assistants, and students, shall be exempted from all rates, taxes, or military duties. And the buildings belonging to said Institution, and all lands necessary for exercise, agricultural and horticultural purposes, and other conveniences, not, however, exceeding two hundred acres, shall be exempted from all taxes or rates whatever.

SEC. 8. It is hereby further enacted, that the Governor of this State be, and hereby is empowered and required to issue to said Trustees and their successors, a charter of incorporation, made in due form of law, agreeably to this act, previous to the first meeting of said Trustees, which shall take place at the University building, on the first Wednesday of December, A. D., one thousand eight hundred and thirty-four.

SEC. 9. Provided, nevertheless, and it is hereby further enacted, that the Legislature shall have power to alter, amend or disannul said charter whenever sufficient cause for so doing shall, in their estimation exist, anything in this act to the contrary notwithstanding.

Passed November 6th, 1834.

"AN ACT IN ADDITION TO AN ACT INCORPORATING NORWICH UNIVERSITY."

"It is hereby enacted by the General Assembly of the State of Vermont, that the Trustees of the Norwich University, may, at any regular meeting of their Board, by a vote of two-thirds of the members present, locate said University at any place within this State, easterly of the Green Mountains."

Approved November 1st, 1843.

AN ACT TO AUTHORIZE THE GOVERNOR TO LOAN ARMS, &C., TO NORWICH UNIVERSITY.

It is hereby enacted by the General Assembly of the State of Vermont:

SEC. 1. The Governor is authorized to loan to Norwich University such arms and equipments of all kinds, the property of this State, as said University shall need, for the purpose of instructing its students in military tactics.

SEC. 2. The Governor is further authorized to make requisition upon the United States Government for eighty cadet muskets, as a part of the quota of arms appointed in this State, under the Act of Congress, and loan said University, as provided in this Act. Provided, that, before said muskets shall be delivered to the University, the President or Treasurer thereof shall execute to the Governor a certificate acknowledging the receipt of the same, and conditioned for the safe keeping and return thereof to the Governor, when by him ordered.

SEC. 3. This Act shall take effect from its passage.

Approved November 26, 1862.

"AN ACT TO AMEND AN ACT ENTITLED AN ACT INCORPORATING AND ESTABLISHING THE NORWICH UNIVERSITY IN WINDSOR COUNTY." Passed November 6, 1834.

It is hereby enacted by the General Assembly of the State of Vermont:

SEC. 1. Section five of "An Act incorporating and establishing the Norwich University, at Norwich, in Windsor county, passed November 6, A. D., 1834," is hereby so amended as to read as follows: "It is further enacted that the Trustees aforesaid, shall have and exercise the government of said Institution, together with the care and management of all matters and affairs belonging thereto, and shall have power to make and establish all such reasonable and proper laws, rules, and regulations, as may be necessary for the governing and instructing and education of the students, and the managing of said Institution, and the same may alter and repeal from time to time, as they may see fit, provided the same be not contrary to the constitution of this State, and of the United States; and said laws, rules and regulations, shall be laid before the Legislature of this State, whenever required by that body, and may be by them disallowed, altered, or repealed."

SEC. 2. This Act shall take effect from its passage.

Approved November 10, 1866.

AN ACT RELATING TO THE MILITIA.

It is hereby enacted by the General Assembly of the State of Vermont:

SEC. 1. The Adjutant General of the State may, upon the application of the President of Norwich University, authorize the enlistment in the State of one company of infantry, and one section of artillery, to be formed of the cadets of said University, and attach the same to any regiment of infantry and battery of artillery, not already filled.

SEC. 2. The professor of military science and tactics in the Norwich University shall be ex-officio commander of the organization, with the rank of captain. The other officers shall be commissioned by the Governor of the State, upon the recommendation of the professor of military science and tactics, and shall consist of one cadet captain with the rank of first lieutenant, and a cadet lieutenant with the rank of second lieutenant, to each company or section.

SEC. 3. This Act shall take effect from its passage.

Approved November 18, 1870.

"AN ACT TO CHANGE THE NAME OF THE NORWICH UNIVERSITY."

It is hereby enacted by the General Assembly of the State of Vermont:

SEC. 1. An Act entitled "An Act incorporating and establishing the Norwich University, at Norwich, in Windsor County," passed November 6, 1834, is hereby so amended that said corporation shall be known and called by the name of Lewis College.

SEC. 2. This Act shall take effect when the same shall be accepted by a vote of the Trustees of said Norwich University, at a meeting duly called for that purpose.

Approved December 10, 1880.

This Act was accepted by a vote of the Trustees of Norwich University, at a meeting duly called for that purpose, Dec. 31, 1880.

NOTICE TO ALUMNI.

Material is being collected for the publication of a GENERAL CATALOGUE, containing the names, residences, and occupations, so far as may be known, of the Alumni, since 1834; mention is to be made of official positions held, and of important books, pamphlets, orations, etc., by them.

All graduates and past cadets are earnestly requested to forward information for this work, and *contribute to the College Library their respective publications.*

W. C. Ellis '67

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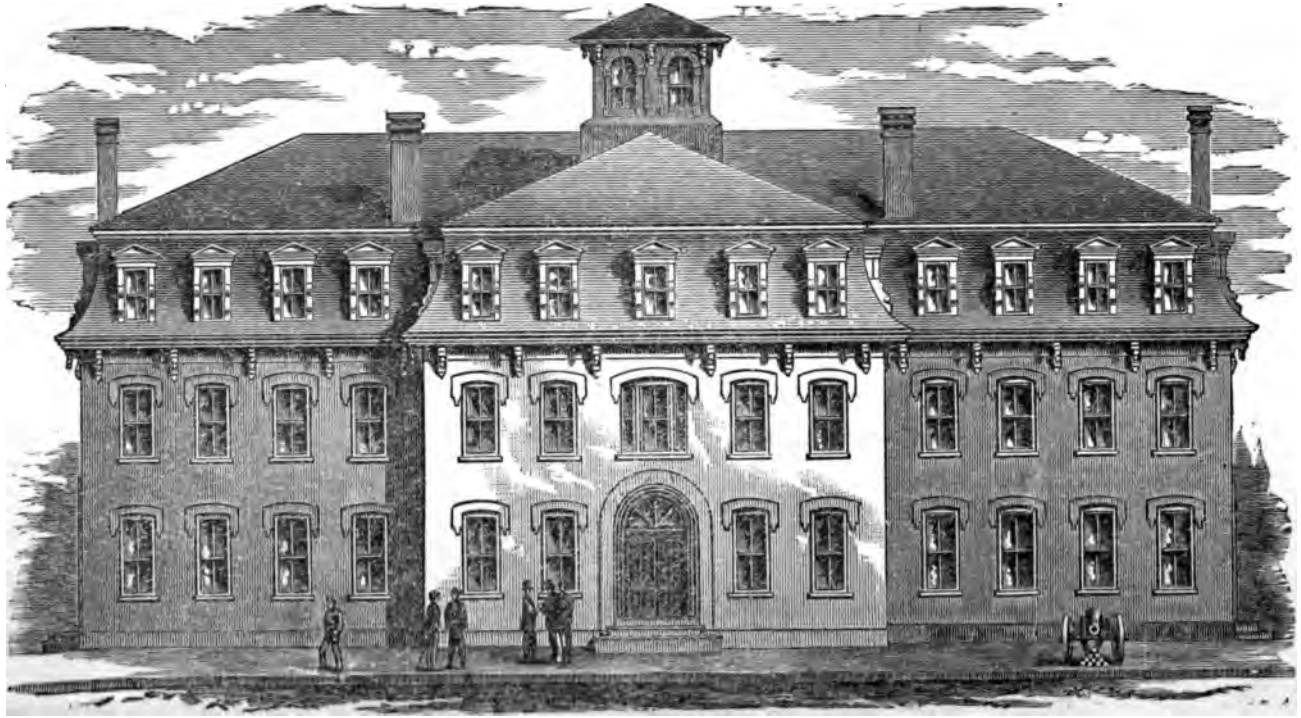
NORWICH UNIVERSITY



Northfield, - - Vermont.

1885-86.





CADET BARRACKS.

CATALOGUE

OF

NORWICH UNIVERSITY.

MILITARY, SCIENTIFIC AND CLASSICAL.



Northfield, - - Vermont.

NORTHFIELD, VT:
WHITNEY'S STEAM PRINTING HOUSE.
1886.

CORPORATION.

PRESIDENT.
COL. CHARLES H. LEWIS, LL.D., New York City.

VICE PRESIDENT:
HON. GEORGE NICHOLS, M. D.,LL.D., Northfield.

SECRETARY.
P. D. BRADFORD, A.M., Ph.D., Northfield.

TREASURER:
J. C. B. THAYER, ESQ., Northfield.

TRUSTEES.

HON. DUDLEY C. DENISON	Royalto
REV. JOSIAH SWETT. D. D	Highgat
COL. HENRY O. KENT	Lancaster, N.
HON. GEORGE NICHOLS, M. D.,LL.D	Northfiel
HON. P. D. BRADFORD. M. D	Northfiel
GEN. LEVI G. KINGSLEY	Rutlan
COL. CHARLES B. STOUGHTON	New York Cit
HIRAM ATKINS, ESQ	Montpelie
GEO. M. FISK, ESQ	Northfiel
COL. KITTREDGE HASKINS	Brattlebor
JAMES A. L. WHITTIER, ESQ	Boston, Mas
MAJ. HENRY E. ALVORD, C. E	Mountainville, N.
JOSEPH STEDMAN. M. D	Boston, Mas
COL. CHARLES H. LEWIS, LL.D	Boston, Mas
CAPT. GEORGE W. HOBBS	Uxbridge, Mas
CLARENCE L. HATHAWAY, M. D	Boston, Mass
JOHN P. DAVIS, ESQ	Northfield
GEN. GRANVILLE M. DODGE	New York
COL. GEORGE W. HOOKER	Brattleboro
GEORGE W. SOPER	West Randolph
COL. GEORGE N. CARPENTER	Boston, Mass
EDWIN PORTER, M. D	Northfield
WALDO P. CLEMENT	New York City
J. C. B. THAYER	Northfield
COL. F. E. SMITH	Montpelier

FACULTY.

HON. GEORGE NICHOLS, M. D., LL.D.,

VICE PRESIDENT.

CHARLES DOLE, A. M.

Professor of Rhetoric, History, and Political Science.

WILLIAM MOSER RUMBAUGH, C. E.,

Professor of Military Science, Drawing and Topographical Engineering.

JOHN BENJAMIN JOHNSON, A. M.,

Professor of Mathematics and Astronomy.

LOUIS HABEL, A.M., Ph.D., Phar.M., M.A.A.S. &c.

Late First Assistant of the Chemical-Physiological Laboratory, Bonn, Germany.

Professor of Chemistry, Metallurgy, Physics and Natural Sciences.

SECRETARY OF THE FACULTY.

ASA HOWE, A.M. C.E.,
Professor of Engineering, Field Work.

REV. ISAAC PHILLIPS BOOTH, A. M.,
Professor of Latin and Greek.

LOUIS HABEL, Ph. D.,
Professor of Modern Languages.

PHILANDER DRURY BRADFORD, A.M., Ph.D.
Professor of Anatomy and Physiology.

HIRAM ADOLPHUS CUTTING, A.M., Ph. D.
STATE GEOLOGIST OF VERMONT.
Lecturer in Natural Science and Geology.

CLARENCE LOCKWOOD HATHAWAY, M. D.,
Lecturer on Hygiene.

GEORGE NATHANIEL CARPENTER, A. M.,
Lecturer on Commercial Ethics.

MILITARY STAFF.

CAPT. WILLIAM M. RUMBAUGH, N.G.V.,
COMMANDANT

LIEUT. CHALES DOLE, N.G.V.,
QUARTERMASTER.

LIEUT. JOHN B. JOHNSON, N.G.V.,
ADJUTANT.

PHILANDER D. BRADFORD,
SURGEON.

REV. F. C. COWPER,
CHAPLAIN.

JAMES EVANS,
ARMORER.

REQUIREMENTS OF ADMISSION.

All candidates for admission to the College must be at least fifteen years of age, and must present satisfactory evidence of good moral character.

TO THE COURSES IN SCIENCE AND CIVIL ENGINEERING, CHEMISTRY AND PHYSICS, SCIENCE AND LITERATURE.

Candidates will be examined in the following studies:

Mathematics.—Arithmetic; Algebra, through simple equations; Geometry, four books of Davies' "Legendre," or its equivalent.

English Language.—Grammar; Composition, with special attention to punctuation and the use of capitals.

Geography.—Physical and Political Geography.

History.—History of the United States.

Physics or Chemistry.—Steel's fourteen weeks or their equivalents.

French.—Grammar; translation of French at sight; the translation of English into French.

Or, *German.*—Grammar; translation of German at sight; the translation of English into German.

Or in place of a Modern Language the candidate may offer:

Latin.—Allen and Greenough's or Harkness' Latin Grammar and Latin Prose Composition; Cæsar's

TO THE COURSE IN ARTS.

In addition to the examinations in Mathematics, English Language, Geography, History and Physics or Chemistry, laid down for the courses in Science, examinations will be as follows:

Latin.—Cæsar's "Commentaries," four books, or Salust's "Catiline;" Virgil's "Ænead," six books; Cicero, four orations.

Greek.—Xenophen's "Anabasis," four books, or one hundred pages Goodwin's Greek Reader; Homer's "Iliad," two books.

Graduates from high schools will be admitted without examination.

Candidates not fully prepared in all the requirements, will be conditioned for a limited time or placed in a Preparatory class.

ADVANCED STANDING.

Candidates for advanced standing will be examined in all the previous studies of the course; and if they come from another institution, will present certificates of honorable dismission.

COURSES OF INSTRUCTION.

Four regular courses have been established, as follows:

I. *A course in Science and Civil Engineering.*
II. " " " *Chemistry and Physics.*
III. " " " *Science and Literature.*
IV. " " " *Arts.*

The first two of these have a distinctly practical bearing, and give a thorough training for most of the scientific professions.

The course in Science and Literature is established for such as may not wish to pursue the full course in Mathematics, or that for a distinctly scientific profession, and is designed to furnish a liberal preparation for business pursuits.

Each of these courses extends through four years, and is intended to give to the student a liberal culture.

SYNOPSIS OF STUDIES.

FIRST YEAR.

FOR ALL COURSES EXCEPT IN ARTS.

Algebra; Geometry; Trigonometry, plane and spherical; General Chemistry; Physics; French or Latin; Rhetoric; History, Greece and Rome; Drawing, freehand and geometrical; Military Instruction, infantry drill, and sword and bayonet exercise.

I. SCIENCE AND CIVIL ENGINEERING.

(Leading to the Degree of B. S.)

SECOND YEAR.

Descriptive Geometry; Analytic Geometry; Differ-

ential Calculus; Surveying, theory and practice; Leveling, field practice; Shades and Shadows, theory and drawing; Perspective and Topography; Qualitative Chemical Analysis; French or Latin; History of England and France; Military Instruction, infantry drill, sword and bayonet exercise, and lectures on the customs of the service.

THIRD YEAR.

Integral Calculus; Mechanics of solids, fluids, gases and molecules, practical appliances; Geology, dynnamical; Physics, Heat, Electricity and Magnetism; German or Latin; Logic; Commercial Law; International Law; Topography, field practice and drawing; Military Instruction, infantry and artillery drill, guard and out-post duty, and lectures on military subjects.

FOURTH YEAR.

Natural Philosophy, acoustics and optics; Geology, structural and historical; Astronomy, descriptive, physical and spherical; Hydrography, machine drawing and structural drawing; Civil Engineering, theory, roads, bridges, tunnels, canals, strength of material, practical operations, Leveling for Section and Working; Architecture, drawings; German or Latin; Political Economy; Constitutional Law; Elements of Criticism; Military Instruction, infantry and artillery drill, art of war, and engineering.

II. CHEMISTRY AND PHYSICS.

(Leading to the Degree of A. C.)

SECOND YEAR.

Descriptive Geometry; Analytic Geometry; Surveying, theory and practice; Drawing; French or Latin; Qualitative and Quantitative Analysis, lect-

ures and laboratory work; Blow-Pipe Analysis; Crystallography and Determinative Mineralogy; History of England and France.

THIRD YEAR.

Mechanics of solids, fluids, gases and molecules, practical appliances; General Physics, Heat, Electricity and Magnetism; Organic Chemistry; Geology, dynamical; Quantitative Analysis, laboratory work; Industrial Chemistry; Physical Laboratory; German or Latin; Logic.

FOURTH YEAR.

Applied Mechanics; General Physics, acoustics and optics; Chemical Philosophy; Volumetric Analysis; Water and Gas Analysis; Chemical application of physics; Metallurgy; Principles of Scientific Investigation; Geology, structural and historical; German or Latin; Political Economy; Constitutional Law; Elements of Criticism; Thesis Work.

At the end of each term and the whole course, there will be a practical examination in Analytical Chemistry which will decide the standing.

III. SCIENCE AND LITERATURE.

(Leading to the Degree of B. Lit.)

SECOND YEAR.

Descriptive Geometry; Analytic Geometry; Surveying, theory and practice; French or Latin; History of England and France; Leveling, field practice; Drawing, shades and shadows; Perspective and Topography; English Literature; Crystallography and Determinative Mineralogy; Qualitative Chemical Analysis.

THIRD YEAR.

German or Latin; Logic; Botany; Zoology; Ge-

ology, dynamical; Commercial Law; International Law; History of Germany; Physics, Heat, Electricity and Magnetism; Topographical Drawing.

FOURTH YEAR.

German or Latin; Political Economy; Geology, structural and historical; Literature; Elements of Criticism; Constitutional Law; Philosophy of History; Physics, accoustics and optics.

IV. COURSE IN ARTS.

(Leading to the Degree of A. B.)

FIRST YEAR.

Greek; Latin; Geometry; Algebra; Trigonometry; Physics; General Chemistry; Free-Hand and Geometrical Drawing.

SECOND YEAR.

Greek; Latin; Descriptive Geometry; Analytic Geometry; Surveying, theory and practice; History of England and France; Leveling, field practice; Drawing; Perspective and Topography; Qualitative Chemical Analysis; English Literature.

THIRD YEAR.

[Greek and Latin, elective]; French or German; Geology, dynamical; Logic; Physics, Heat, Electricity and Magnetism; Commercial Law; International Law, History of the Roman Empire.

FOURTH YEAR.

[Greek and Latin. elective]; French or German; Political Economy; Constitutional Law; Literature; Constitutional Law; History of Germany; Philosophy of History; Elements of Criticism; Geology, structural and historical; Physics, acoustics and optics.

Composition, Declamation and Oratory will be pursued throughout all courses.

Original Orations will be required during the Senior year.

☞ Military Instruction throughout all courses the same as that laid down in Course I.

DEGREES.

The time required for any full course leading to a Degree is four years. Students can enter in advance by passing satisfactory examinations in the studies already gone over by the class they propose to enter, and those required for admission.

The candidate for any Degree must deposit with the Faculty a satisfactory thesis on some scientific or literary study connected with his department.

DEGREES ON GRADUATION.

The Degree of Bachelor of Science is conferred upon any student who has completed the course in Science and Civil Engineering, and has passed the required examinations.

The Degree of Analytical Chemist is conferred upon any student who has completed the Course in Chemistry and Physics and has passed the required examinations.

Any candidate for this Degree whose term standing in any branch of Chemistry falls below 80, will have to pass another examination of a study or lose the term if it is in Analytical Chemistry.

The Degree of Bachelor of Arts is conferred upon any student who has satisfactorily completed the course in Arts.

The Degree of Bachelor of Literature is conferred upon any student who has satisfactorily completed the course in Science and Literature.

ADVANCE DEGREES.

The Master's Degree in Science or Arts is conferred upon graduates of this University of three years' standing, who have taken the corresponding Bachelor's Degree, and who, during that time shall have been engaged in professional, literary or scientific pursuits, or have pursued a course marked out by the Faculty for two years after graduation, and passed the examinations.

The Degree of Civil Engineer may be conferred upon graduates in Science and Civil Engineering of three years' standing, who have pursued the profession of an engineer during the time, and passed the requisite examinations; or upon cadets who satisfactorily complete an additional course.

MISCELLANEOUS.

ACADEMIC YEAR AND RECESS.

The College year begins the second Thursday in September, and closes the third Thursday in June. There will be a recess of two weeks, commencing the Thursday before Christmas and one of one week, commencing the Thursday before Fast-Day.

STANDING, MILITARY CUSTOMS, ETC.

Academic standing depends upon recitations; Military standing, upon marks of merit and demerit, together with proficiency in military duties. Immoralities, technical and minor offences, are marked with demerits, and are punishable in other ways. Wherever purely academic duties require variation in special matters, the analogies of military usage are maintained, so far as practicable.

The students are called cadets, and are under military discipline. The cadet officers are appointed on basis of military and academic standing. Every cadet is required to wear the uniform of the University during term time. The cadets are instructed theoretically and practically in Infantry and Artillery Tactics and Drill, Bayonet and Sword Exercises, Fortification, Reconnoisance, Castrametation, and in Guard and Out-post Duty.

UNIFORM.

A single-breasted dress-coat of dark blue cloth, University buttons; trousers, dark blue, with light blue stripe; black cravat; U. S. regulation helmet, with usual gilt ornaments, forage cap; boots, or high shoes of black, unglazed leather. The Commandant can furnish accurate directions for the tailor's use, if desired. The uniform can doubtless be better made, and more cheaply, at Northfield, than elsewhere.

PUBLIC WORSHIP.

Prayers are held before the opening of academic exercises on each week-day morning. Upon Sunday morning, every cadet is required to attend divine service with some one of the village congregations, the choice being made at the beginning of the term by the cadet himself, if of age, or, otherwise, by his parents or guardians, and adhered to throughout the term. The village societies to which the choice is thus limited are: Congregarionalist, Episcopal, Methodist, Roman Catholic, and Universalist.

ADMISSION, DUTIES, ETC.

Candidates for admission will report to the Commandant, and sign the Rules and Regulations of the University.

All cadets will be equally subject to the regula-

tions in regard to uniform, equipments, drills, discipline and recitations. All cadets whose homes are not in the village will room in the Barracks.

Good boarding places can be obtained at reasonable rates in various parts of the town.

EXPENSES.

The following table gives a statement of the expenses:

TUITION PER COLLEGE YEAR,	$45 00
ROOM-RENT,	15 00
LIBRARY AND CONTINGENT EXPENSES,	5 00

The charge for room-rent is based upon the supposition that two students occupy the same room. Cadets furnish their own rooms.

All entering advance classes will be required to pay one-half the back tuition, unless coming from another college.

Injury to the property of the college will be repaired at the expense of the cadet causing it; but the damage will be equally assessed upon all members of the corps if the perpetrator be unknown. Every cadet will be held responsible for any injury done in his own room.

Cadets who are appointed musicians will have their tuition remitted.

Bills are payable strictly in advance. No deduction will be made on account of sickness.

Students are charged for the chemicals and apparatus consumed. A fee of $5.00 is charged for material, etc., (but not including waste of chemicals or breakage) used in Qualitative Chemical Analysis, laid down for students of all courses. Students of the course in Chemistry are required to deposit during the Sophomore year $10.00, and during the Junior and Senior year $15.00 for material, etc., at the

beginning of every term, the amount not consumed being returned.

A deserving student of the Chemical course who has finished Qualitative Analysis and worked some in Quantitative Analysis, may be appointed Assistant, and will have all his Laboratory expenses—except breakage—remitted.

The Central Vermont Railroad allows half fare.

The Passumpsic Railroad allows free return checks to students paying full fare in coming to attend the University.

For further information address either the VICE PRESIDENT or the SECRETARY of the Faculty, at *Northfield, Vermont.*

SCHOLARSHIPS.

The State Legislature has provided for thirty free scholarships according to the following act from the laws of 1884:

AN ACT RELATING TO THE APPOINTMENT OF CADETS TO NORWICH UNIVERSITY.

SEC. 1. There shall be admitted, free of charge for tuition and room rent, to the Norwich University, at Northfield, as many students from each county in the State as there are senators from such county in the general assembly, who shall be instructed in all departments of learning taught in said university, and be subject to all the rules and regulations of said school.

SEC. 2 The senators in each county shall designate and appoint the cadet or cadets from such county to the said university, and, whenever a vacancy occurs from such county for any cause, fill the same; said appointments to be made by competitive examination, in the month of June in each year, and whenever a vacancy

SEC. 3. Whenever the senators from any county shall fail to fill any vacancy from such county for one month after being notified of the same by the trustees of said University, the trustees may fill the same by appointing from that county if there are any applicants who pass the examination required by the rules of said University, and, if not, then from any county in the State.

SEC. 4. The auditor of accounts shall draw his order on the treasurer of the State, payable to the trustees of said University or the treasurer thereof, for the sum of fifty dollars for each cadet so attending said University, appointed as above, which shall be in full payment for tuition and room rent for such cadets, said tuitions to be payable in conformity with the rules of said University now existing as to the payment of tuitions, on the sworn statement of account of the president or vice-president of said University, and to be paid by the first day of June in each year.

SEC. 5. This act shall take effect from its passage.

Approved November 25, 1884.

In addition to the above there have been created twelve half scholarships by benevolent friends of the University.

Young men desiring to take advantage of these cadetships hereby offered, should address the Secretary of the Faculty at Northfield.

HISTORICAL SKETCH.

In 1819, the superintendent of the United States Military Academy, Capt. Alden Partridge, resigned his commission at West Point to establish a military school at Norwich, Vt., his native town. As he was an able and efficient officer, his school soon obtained celebrity, and, in a short time, hundreds of young men from different parts of the country were in attendance, uniformed, and organized as a corps of cadets.

This school was known as the American Literary, Scientific and Military Academy, until Nov. 6, 1834, when a charter of incorporation was granted it by the State of Vermont, under the name of Norwich University. Thus was founded the first scientific, classical and military college in the Union. The charter gives full power to confer all such degrees, diplomas, honors or licences as are usually conferred by colleges or universities, and makes requisite a continuous course of military instruction, the State furnishing arms and equipments.

In 1853 Gen. Truman B. Ransom, an alumnus was elected President, and maintained its high reputation and popularity till, four years later, he resigned to take command of the Ninth New England Regiment, for the Mexican war. He fell, gallantly leading his men, at the storming of Chapultepec. (Maj. Gen. T. E. G. Ransom, also an alumnus, who was killed in the late war, was his son.)

In 1850 Rev. Edward Bourns, LL. D., for several years professor in one of the English Universities,

and one of the ripest scholars and ablest thinkers of his day, was elected President. Dr. Bourns held this office for fifteen years, then that of professor, till his decease in 1872. During his administration, Gen. Alonzo Jackman, LL. D., was professor of Military Science and Mathematics. Gen. Jackman occupied the chair of Mathematics up to the time of his death, Feb. 24, 1879.

Heavy losses by fire at Norwich in March, 1866, caused the removal of the University, the following autumn, to Northfield, where the present barracks were erected by the enterprising citizens of the town. Here the same system of instruction and military discipline has been carried on, and enabled many young men to go forth and fill high positions in various professions.

This was the first institution in the country to lay down a purely scientific course of study, and, up to the time of the Rebellion, the only one which embraced in its curriculum thorough military, classical and scientific courses. By her work for half a century, she has earned a title to the general confidence of the public. She has contributed a large number of able officers to the army and navy, and, as special attention has always been given to civil engineering and military science, her graduates have become particularly distinguished as army officers and civil engineers, many having won distinction in the service of their country during both the Mexican war and the war of the Rebellion, some having risen to the foremost rank of military commanders.

When, in '61, the nation called for defenders, the graduates of Norwich University were sought for throughout the loyal States as officers, and the long list of names on her army-roll shows how nobly they responded. So generously did the under-graduates

respond to the call upon the institution, that for two years there was no commencement, all of the senior class and many from other classes having gone into the army.

In business and political life, in the learned professions, and in science and art, many of her alumni have been eminently successful, and honored the institution which sent them forth from her halls. In the list of the most eminent civil engineers of the country we find the names of Gens. Dodge and Buel, Seymour and Wright, with other "N. U." men.

The Norwich University roll of honor contains the names of twelve general officers, forty colonels, and a host of officers of lower grades, brave men and true, a large number of whom laid down their lives that their country might live.

It has ever been the design of this University while disciplining the mind of young men, to give them, at the same time, that practical instruction that best fits men for business life. How well this work has been done let the story of the lives of those who have gone out from her halls bear record.

N. U. Corps of Cadets.

Seth Burton Adams,	Alburgh
Elmer Adelbert Aseltine,	Swanton
Charles Edward Austin,	Northfield
Fred Thad Austin,	Northfield
Holmes Ezra Bates,	Waitsfield
Edwin Cowgill Bearss,	Peru, Ind
Fred Rice Belknap,	Niles, Mich
William Orlando Belknap,	So. Royalton
Ernest Victor Booth,	Northfield
Ben Holmes Chamberlin,	Northfield
Myron Lemuel Chandler,	Berlin
Charles Herman Cheney,	So. Manchester, Conn
Fred Howe Clark,	Northfield
George Herbert Cobleigh,	Northfield
Charles Edwin Collins,	Northfield
Herbert Nelson Cross,	Gouldsville
Homer John Dane,	Northfield
Nathaniel Reene Davis,	Northfield
Harry Simons Denny,	So. Northfield
Heman Ellsworth Dole,	Northfield
William John Dooley,	Northfield
Pearl Lewis Ellis,	Pittsfield
William Arba Ellis,	Northfield
Paris Moore Fletcher,	Northfield
George Walter Gifford,	East Bethel
Elbridge Wheeler Gilman,	Marshfield
Henry Hale Goss,	Chelsea
Willie Ethel Terrill,	Underhill
Cornelius Palmer,	Underhill

Walter Edwin Hassam,	Northfield
Fred Farnham Hayward,	Tunbridge
Willard Chandler Hefflon	Highgate Center
Herman Elmer Holbrook.	Morrisville
Robert Liston Irish,	Northfield
Luther Burnham Johnson	Northfield
Elmer Roland Juckett,	Hubbardton
Henry Percy Kent,	Lancaster, N. H
Charles L. Lyons,	Highgate
Frank Arthur Morse,	Northfield
Charles Henry Nichols,	West Randolph
Charles Fred Parker,	Northfield
Earl Henry Prince,	Randolph
Wright Seth Prior,	Underhill
Charles Edwin Quinby,	Gouldsville
Phil Sheridan Randall,	Northfield
Aurin Ralph Shaw,	Northfield
William Alden Shaw,	Northfield
Rowland Wardwell Stewart,	Bangor, Me
Jona Eugen Tinker,	Albany
Henry Truman Way.	Hardwick
Edgar Eugene Wright,	Northfield

CADET OFFICERS FOR 1885.

Fred Rice Belknap,	Captain
Myron Lemuel Chandler,	1st Lieutenant
Charles Herman Cheney,	Corporal
Charles Henry Nichols,	"
Earl Henry Prince,	"
Rowland Wardwell Stewart,	"

CADET OFFICERS FOR 1885-86.

Earl Henry Prince,	1st Lieutenant
Charles Henry Nichols,	2nd Lieutenant
Phil Sheridan Randall,	Sergeant
Charles Edward Austin,	Corporal
Ernest Victor Booth,	"
Walter Edwin Hassam,	"
Fred Thad Austin,	Musician

N. U. CADET BAND.

Serg. Phil S. Randall,	Drum Major
Fred F. Hayward,	Leader

INSTRUMENTATION.

Fred F. Hayward,	Solo B♭ Cornet
Sergt. P. S. Randall,	2nd Solo B♭ Cornet
H. E. Dole,	B♭ Cornet
Corp. W. E. Hassam,	Solo E♭ Alto
W. A. Shaw,	1st E♭ Alto
H. P. Kent,	2nd E♭ Alto
Corp. C. E. Austin,	1st B♭ Tenor
A. R. Shaw,	2nd B♭ Tenor
H. H. Goss,	Tuba
H. E. Bates,	Bass Drum
Mus. F. T. Austin,	Side Drum

NOTICE.

A GENERAL CATALOGUE, containing the names, residences, and occupations, so far as may be known, of the Alumni and Past Cadets, since 1834, mentioning also the official positions held by them, is being prepared by Prof. Habel.

All graduates and past cadets are earnestly requested to forward information for this work, and contribute to the College Library their respective publications.

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NORWICH UNIVERSITY,

Northfield, Vermont.



MILITARY, SCIENTIFIC AND CLASSICAL.

1887-8.

DUP EXCH 7 MAY 1906



Opinions of the Press.

The United States Signal Service has established a new station at the Norwich University, Northfield, Vt., and has detailed Sergeant Henry J. Cox, formerly of the Boston Signal Service office, to take charge of the station. This will afford the cadets an excellent opportunity for instruction and practice in meteorology and signaling.—Boston Daily Journal.

We are in receipt of the fifty-third annual catalogue of the Norwich University, and a review of its corps of instructors and curriculum shows they are as fully qualified as ever to do efficient work in educating young men and giving that most useful discipline, military training. This, is an institution in our own state and all who contemplate taking such courses as they offer will do well to consider their claims.—Bradford Opinion.

We have before us a copy of the catalogue of Norwich University, located at Northfield. This school ranks high as a military, scientific and classical institution and is worthy of patronage.—Barre Enterprise.

The fifty-third annual catalogue of Norwich University, Northfield, Vt., is before us. This old institution seems to be in a flourishing condition and established on a solid basis. It pays particular attention to military, scientific and the classical courses.—Poultney Journal.

A Military education is a most desirable thing to possess, even in this republican Government. In our boyhood, anything pertaining to Military was made a laughing stock, and the idea that a war could, by any possibility, disturb the quiet and peaceable nature of our homes, was too absurd to be spoken of. Yet before we had fairly entered the twenties from our birthday, this country was engaged in war of such magnitude as the world had scarce ever seen. We are again at peace, and again the same disposition to ridicule what pertains to the military is to be observed. The past should warn us of the danger of such a course, and teach us to be prepared for any emergency is true wisdom. We are led to these reflections, by receiving a copy of the fifty third Annual Catalogue of Norwich University. People in this section need no introduction to this school, which, for so many years was located at Norwich, opposite Hanover, Under the management of Col. Partridge. It is now located at Northfield, Vt., and still retains its reputation for graduating thorough scholars, both in the civil and military departments.—Claremont, N. H., Eagle.

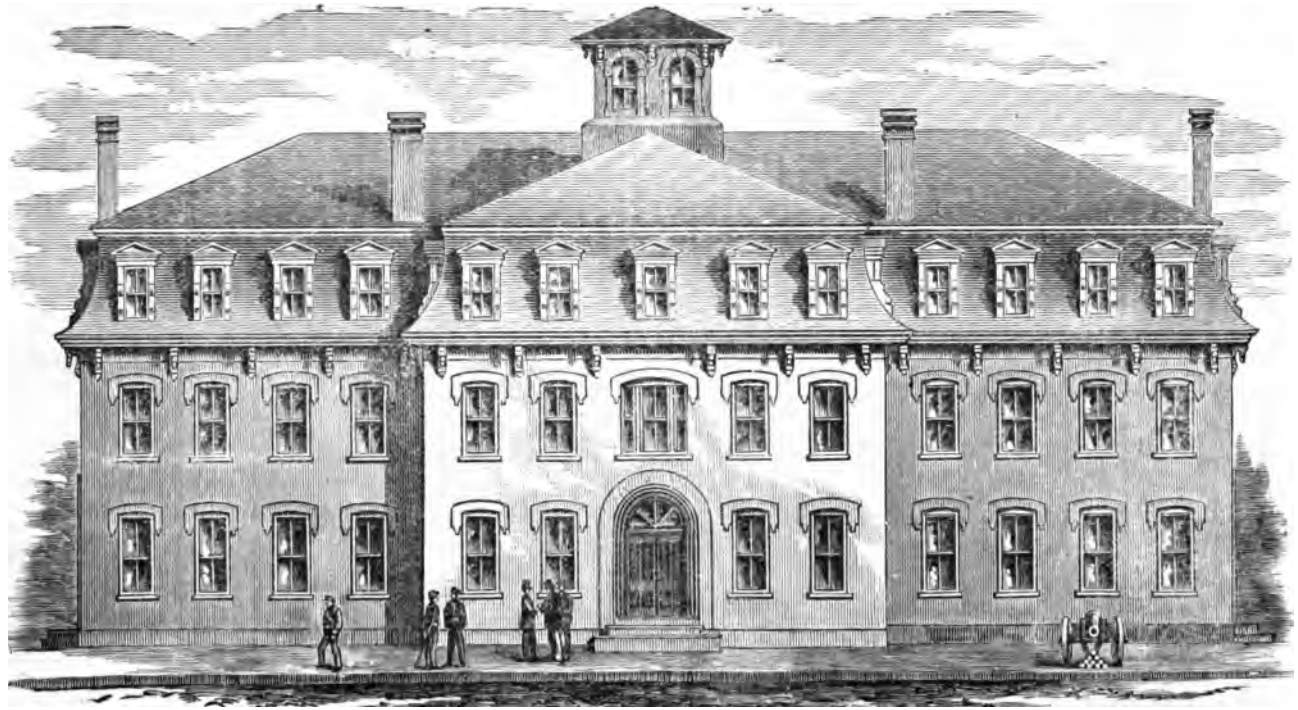
The fifty-third annual catalogue of Norlwch University, just issued shows the institution to be in a thriving condition. The attendance and interest in the college are increasing and the prospects for the future are highly encouraging. The roster of alumni and past cadets contains over one thousand five hundred names, and among the graduates have been many distinguished men.—Vermont, Windsor Journal.

Norwich University, founded by Capt. Alden Partridge, in 1819 at Norwich, and located at Northfield, Vt., since 1866, has a creditable record in the civil war. Among its graduates are counted the names of 12 generals, 25 colonels 40 field officers, 55 captains, 145 lieutenants.—Springfield, Mass., Republican.

The War Department has detailed Lieut. Edward H. Catlin, of the regular Army, as military instructor at Norwich University, Northfield. With a signal service station and a regular army officer to instruct in military drill, in addition to the regular faculty, Norwich University offers especial inducements to students.—Argus and Patriot, Montpelier.

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FIFTY-FOURTH ANNUAL

CATALOGUE

—OF—

Norwich University.



MILITARY, SCIENTIFIC AND CLASSICAL.

Northfield, Vermont.

NORTHFIELD, VT.:
NORTHFIELD NEWS STEAM JOB PRINT.
1887.



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Instructor in English.

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JAMES EVANS,
ARMORER.

All candidates for admission to the College must be at least fifteen years of age, and must present satisfactory evidence of good moral character.

To the Courses in Civil Engineering, Chemistry, Science and Literature.

Candidates will be examined in the following studies:

MATHEMATICS.—Arithmetic; Algebra to Quadratics; Plane Geometry.

ENGLISH LANGUAGE.—Grammar; Composition, with special attention to punctuation and the use of capitals.

GEOGRAPHY.—Physical and Political Geography.

HISTORY—History of the United States.

To the Course in Arts.

In addition to the examinations in Mathematics, English Language, Geography and History laid down for the courses in Science, examinations will be as follows:

LATIN.—Cæsar's "Commentaries," four books, or Sallust's "Catiline;" Virgil's "Æneid," six books; Cicero, four orations.

GREEK.—Xenophon's "Anabasis," four books, or one hundred pages Goodwin's Greek Reader; Homer's "Iliad," two books.

Graduates from approved High Schools will be admitted upon certificates.

Candidates not fully prepared in all the requirements, will be conditioned for a limited time or placed in a Preparatory class.

Advanced Standing.

Candidates for advanced standing will be examined in all the previous studies of the course; and if they come from another institution, will present certificates of honorable dismission.

COURSES OF INSTRUCTION.

COURSE IN MILITARY INSTRUCTION.

For all Students throughout the Four Years. Exercises, Drills or Lectures every day at 4 o'clock, P. M.

Fall Term.

Settings Up, Calls, Manual of Arms, School of the Company and Skirmish Drill; Bayonet Exercises indoors in bad weather.

Winter Term,

Broadsword and Sabre Drill, Manual of the Sword and Fencing. Juniors and Seniors, Lectures on Military Engineering or Military Science and Art of war.

Spring Term.

Artillery Drill and School of the Battery, Battalion Drill, Ceremonies and Dress Parade, Review of all Drills, Signalling, Lectures on Customs of the Service, Camping and Modern Warfare.

The lectures in Military Science and Modern Warfare embody ancient warfare and tactics, field fortification, field engineering, military tactics, artillery duty, principles of gunnery; the attack and defense of fortified places, operations of the siege; attack and defense of a province and principles of base line of operations, torpedo service and other modern means of warfare. These lectures will be illustrated by maps and charts of modern sieges and battles. The lectures in Military Science alternate every other year with those in Modern Warfare, which requires the Junior and Senior classes to attend them.

Military discipline is exercised throughout and the strictest observance of military customs required of Cadets.

Cadets assume the duties of Adjutant, Officer of Day, Guard, etc., in their turn, and are instructed to make out correctly the different descriptions of Military reports; and in short all the duties incident to the field or garrison.

Military exercises and duties are so arranged as not to occupy any of the time that would otherwise be devoted to study. They are attended to, at those hours which are generally passed by students in idleness, or devoted to useless amusements; for which they are made a pleasing, healthful and profitable substitute. They develop those manly arts and a bearing that always characterizes a soldier, and afford excellent physical training.

Military training prepares a young man for emergencies everywhere met; securing not only to himself, but to his country, protection against mobs, riots, strikes and insurrections of every day occurrence, and which can be met in no other way. These facts bring strongly to mind the advantage and necessity of a military education.

Examinations will be held in tactics, orders, duties and customs of Military Service to insure familiarity and their prompt execution.

COURSES OF STUDY.

Five reguiar courses have been established, as follows:

I. A course in Civil Engineering.
II. " " " Architecture.
III. " " " Chemistry.
IV. " " " Science and Literature.
V. " " " Arts.

The first three of these have a distinctly practical bearing, and give a thorough training for most of the scientific professions.

The Course in Science and Literature is established for such as may not wish to pursue a full course in Mathematics, or one for a distinctly scientific profession, and is designed to furnish a liberal preparation for business pursuits.

Each of these courses extends through four years, and is intended to give to the student a liberal culture.

Changes are made in the course in Chemistry to meet the wants of students preparing for Medicine and Pharmacy.

COURSES IN SCIENCE.

FRESHMAN YEAR.

FOR ALL COURSES EXCEPT IN ARTS.

NOTE:—The figures after each subject indicate the number of recitations per week or its equivalent.

FALL TERM:—Algebra, 5; *French or German or Latin, 5; Inorganic Chemistry, 3; Rhetoric, 2; Free Hand Drawing, 5.

WINTER TERM:—Geometry, 5; French or German or Latin, 5; Inorganic Chemistry, 3; Rhetoric, 2; Perspective, 3; Lettering, 2.

SPRING TERM:—Trigonometry, 5; French or German or Latin, 5; Inorganic Chemistry, 3; Rhetoric, 2; Geometrical Draughting, 3; Projection. 2.

I. THE COURSE IN CIVIL ENGINEERING.

Leading to Degree of Bachelor of Civil Engineering.

SOPHOMORE YEAR.

FALL TERM:—Analytics, 5; French or German, 3; Mechanics and Heat, 5; Descriptive Geometry (text,) 3; Descriptive Draughting, 2; Pen Topography, 2.

* Subject to approval of Faculty throughout all courses.

WINTER TERM:—Differential Calculus, 5; French or German, 3; Electricity and Magnetism, 5; Descriptive Geometry, 3; Descriptive D'fting, 2; Tinting and Shading, 2.

SPRING TERM:—Integral Calculus, 5; French or German, 3; Acoustics and Optics, 5; Shades and Shadows (text.) 2; Draughting, 3; Colored Topography, 2.

JUNIOR YEAR.

FALL TERM:—Mechanics of Engineering, 5; Land Surveying, Leveling and Field Work, 5; Geology, 5; Detail Drawings, 3; Graining, Tracings and Blue Prints, 2.

WINTER TERM:—Mechanics of Engineering, 5; Mineralogy, 3; Blow Piping, 2; Qualitative Analysis, 5; Graphic Solutions of Strains in Trusses and Arches, 5.

SPRING TERM:—Bridge Stresses, 5; Botany, 5; Political Economy, 5; Architectural Draughting, 3; Stereotomy and Stone Cutting, 2: Meteorology, 2.

SENIOR YEAR.

FALL TERM:—Hydraulics, 5: R. R. Surveying, 2; Field Work in R. R. Surveying, 4; Commercial Law, 5; Metallurgy, 2.

WINTER TERM:—Spherical Astronomy, Determination of Time, Latitude, etc., 5; International Law, 5; Hydraulic and Sanitary Engineering, 5; Civil Engineering, 3.

SPRING TERM:—Electrical Engineering, lights, dynamos, alarms, house wiring, etc., 5; Contracts, Specifications, Orders for materials and forms, 2; Civil Engineering, 5; Topographical Surveying and Geodetic practice, Preparation of Thesis, 5.

II. COURSE IN ARCHITECTURE.

Leading to the Degree of Bachelor of Architecture.

The Freshman and Sophomore years of this course are identical with the first two years of the course in Civil Engineering.

JUNIOR YEAR.

FALL TERM:—Mechanics of Engineering, 5; Detail

of Building, 5; Land Surveying, Leveling and Field Work, 5; Geology, 5.

WINTER TERM:—Mechanics of Engineering, 5; Graphic Solution of strains in roof trusses, arches, etc., 5; Mineralogy, 3; Blow Piping, 2; Wet Analysis, 5.

SPRING TERM:—Architectural Drafting, 5; Stereotomy and Stone Cutting, 5; Political Economy, 5; Lectures on Egyptian, Grecian and Roman Architecture, 5.

SENIOR YEAR.

FALL TERM:—Hydraulics, 5; Designing, 5; Architectural Decorations, 3; Commercial Law, 5; Metallurgy, 2.

WINTER TERM:—Designing, 5; Construction, 3; Blue Prints and Tracings, 2; Hydraulic and Sanitary Engineering, 5; International Law, 5; Ventilation and Warming, 2.

SPRING TERM:—Modern Architecture and Designing, 5; Electric Wiring for alarms, lights, etc., 5; Contracts, Specifications and Orders, 2; Preparation of Thesis, 5.

III. COURSE IN CHEMISTRY.

Leading to the Degree of Bachelor of Science.

SOPHOMORE YEAR.

FALL TERM:—Chemical Technics, 5; French or German or Latin, 3; Mechanics and Heat, 5; Qualitative Analysis, 5.

WINTER TERM:—Qualitative Analysis, 5; French or German or Latin, 3: Electricity and Magnetism, 5; Blow Pipe Analysis, 5.

SPRING TERM:—Botany, 5; French or German or Latin, 3; Acoustics and Optics, 5; Qualitative Analysis, 5.

JUNIOR YEAR.

FALL TERM:—Land Surveying, 5; General History, 5; Geology, 5; Organic Chemistry, 2; Qualitative Analysis of rare Minerals, 5.

WINTER TERM:—Logic, 5; Natural History, 5; Mineralogy, 3; Organic Chemistry, 2; Quantitative Analysis, 5.

SPRING TERM:—English Literature, 5; Industrial Chemistry, 5; Organic Chemistry, 2; Quantitative Analysis, 7.

SENIOR YEAR.

FALL TERM:—Commercial Law, 5; Agricultural Chemistry, 5; Metallurgy, 2; Toxicology, 5; Medical Chemistry, 5.

WINTER TERM:—International Law, 5: Assaying, 2; Water Analysis, 5; Commercial Chemistry, 3.

SPRING TERM:—Political Economy, 5; Gas Analysis, 5; Thesis, 5.

IV. COURSE IN SCIENCE AND LITERATURE.

Leading to the Degree of Bachelor of Literature.

SOPHOMORE YEAR.

FALL TERM:—History of England, 5; French or German or Latin, 3; Mechanics and Heat, 5: Descriptive Geometry, 5; Pen Topography, 2.

WINTER TERM:—Descriptive Geometry, 3; French or German or Latin, 3; Electricity and Magnetism, 5; Analytical Chemistry, 5.

SPRING TERM:—French or German or Latin, 3; Acoustics and Optics, 5; Analytical Chemistry, 5: Botany, 5.

FALL TERM :—Land Surveying, 5 ; French or German or Latin, 5 ; Geology, 5 ; General History, 5.

WINTER TERM :—French or German or Latin, 5 ; Mineralogy, 3 ; Blow Pipe, 2 ; Logic, 5 ; Natural History, 5.

SPRING TERM :—French or German or Latin, 5 ; Astronomy, 5 ; English Literature, 5.

SENIOR YEAR,

FALL TERM :—French or German or Latin, 3 ; American History, 5 ; Commercial Law. 5 ; Pen Topography, 2 ; Metallurgy, 2.

WINTER TERM :—French or German or Latin, 3 ; Mental and Moral Philosophy, 3 ; International Law, 5 ; Elements of Criticism, 5.

SPRING TERM :—French or German or Latin, 3 ; Political Economy, 2 ; Contracts and Specifications 5 ; Thesis, 5.

V. COURSE IN ARTS.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

FALL TERM :—Algebra, 5 ; Memorabilia and Greek Prose, 5 ; Livy and Latin Prose, 5 ; Rhetoric, 2 ; Free Hand, 5.

WINTER TERM :—Geometry, 5 ; Herodotus, 5 ; Cicero Tusculan Disputations and Roman History. 5 , Rhetoric, 2 ; Perspective, 3 ; Lettering, 2.

SPRING TERM :—Trigonometry, 3 ; Homer's Odyssey and Grecian History, 5 ; Horace's Odes, 5 ; Rhetoric, 2 ; Geometrical Draughting, 2 ; Projection, 3.

SOPHOMORE YEAR.

FALL TERM :—Sophocles, 5 ; Juvenal's Satires, 5 ; Mechanics and Heat 5.

WINTER TERM :—Euripides, 5 ; Tacitus, 5 ; Electricity and Magnetism, 5.

SPRING TERM :—Aeschylus, 5 ; Tacitus, 5 ; Acoustics and Optics, 5 ; Botany, 5.

JUNIOR YEAR.

FALL TERM :—Demosthenes, 2 ; Pliny, 3 ; Geology, 5 ; French or German, 5 ; Inorganic Chemistry, 3 ; Pen Topography, 2.

WINTER TERM :—Plato, 2 ; Plautus, 3 ; Logic, 5 ; Inorganic Chemistry, 3 ; French or German, 5.

SPRING TERM :—Greek Syntax, 2 ; Latin Syntax, 3 ; French or German, 5 ; Inorganic Chemistry, 3 ; Astronomy, 5.

SENIOR YEAR.

FALL TERM :—Land Surveying, 5 ; Analytical Chemistry, 5 ; French or German, 3 ; Commercial Law, 5.

WINTER TERM :—Mineralogy, 3 : Blow Pipe Analysis, 2 ; French or German, 3 ; International Law, 5 ; Elements of Criticism, 5 ; Mental and Moral Philosophy, 3.

SPRING TERM :—Natural History, 5 ; French or German, 3 ; Political Economy, 3 : Thesis, 5.

NOTE :—Two hours work in laboratory and drawing room are equivalent to one hour recitation.

Composition, Declamation and Oratory will be pursued in all courses throughout the four years. Original orations are required during the Senior year.

Military instruction throughout all courses the same as laid down in Military Course.

TEXT BOOKS.

MATHEMATICS :—Astronomy, Loomis' Treatise. Algebra, Wentworth's Complete. Analytical Geometry,

Loomis. Calculus, Taylor. Geometry, Davies' Legendre. Mechanics, Church. Trigonometry, Davies'. Descriptive Geometry, Church.

SCIENCES :—Botany, Gray's School and Field Book. Chemistry, Analytical Qualitative, Fresenius. Analytical Quantitative, Fresenius. Blowpipe. Nason's Elderhorst. Inorganic, Remsen. Organic, Remsen. Physics, Gage's Elementary with Lectures on special subjects. Geology, Winchell's Geological studies. Mineralogy, Dana's Manual and Foye's Tables.

LANGUAGES :—French, Fasquelle's Complete Course. Knapp's French Readings, Various French Works. German, Otis Elementary German Course, Whitney's German Grammar, Hodges Scientific German, German Literature. Greek. Goodwin's Grammar. Latin, Harkness and Allen Greenough's Grammar.

HISTORY :—General History, Webber's. Grecian, Smith's. Roman, Smith's. American History, Lectures.

RHETORIC :—Quackenboss. Political Economy, Mills (Laughlin.) International Law, Woolsey. Commercial Law, Townsend. Logic. Whately. Moral Philosophy, Calderwood's.

ENGLISH LITERATURE :—Welch.

ENGINEERING :—Land Surveying, Gillespie. R. R. Surveying, Searles. Bridge Strains, Stresses, Greene. Civil Engineering, Mahan and Trautwein. Free Hand Drawings, from objects and castes.

DEGREES.

The time required for any full course leading to a Degree is four years. Students can enter in advance by passing satisfactory examinations in the studies already

gone over by the class they propose to enter, and those required for admission.

The candidate for any Degree must deposit with the Faculty a satisfactory thesis on some scientific or literary study connected with his department.

Degrees on Graduation.

The Degree of Bachelor of Civil Engineering is conferred upon any student who has completed the course in Civil Engineering, and has passed the required examinations.

The Degree of Bachelor of Architecture is conferred upon any student who has satisfactorily completed the course in Architecture.

The Degree of Bachelor of Science is conferred upon any student who has completed the course in Chemistry.

The Degree of Bachelor of Literature is conferred upon any student who has satisfactorily completed the course in Science and Literature.

The Degree of Bachelor of Arts is conferred upon any student who has satisfactorily completed the course in Arts.

Advance Degrees.

The Master's Degree in Science or Arts is conferred upon graduates of this University of three years' standing, who have taken the corresponding Bachelor's Degree, and who, during that time shall have been engaged in professional, literary or scientific pursuits, or have pursued a course marked out by the Faculty, for two years after graduation, and passed the examinations.

The Degree of Civil Engineer may be conferred upon graduates in Science and Civil Engineering of three years' standing, who have pursued the profession of an engineer during the time, and passed the requisite examinations; or upon cadets who satisfactorily complete an additional course.

SUBJECTS AND METHODS OF INSTRUCTION.

Engineering.

Instruction in this department begins with Free Hand Drawing which is taught by means of lectures and general exercises from the blackboard, from flat copies and from models. The work embraces a thorough training of the hand and eye in accurate outline drawing, sketching, elementary perspective and object drawing. The effort is to produce designers instead of mere copyists. In the second term practice in lettering drawings is given. A few plates of large black letters and figures, suitable for the titles of large drawings are required, and the rest of the term is devoted to pen work in small and capital italic lettering. Neatness of text and rapidity of execution are aimed at. The third term is spent in acquiring dexterity in the handling of the common draughting instruments. This result is obtained by solving various geometrical problems and by the projection of splices and joints orthographically and isometrically. The problems are given from the board and the projections are taken from wooden models. Descriptive Geometry is taught with special reference to its applications to shades and shadows, stone cutting and the design of stone bridges, culverts, spiral stairways, etc. Tinting and shading are treated so that while the student becomes familiar with the uses of brushes and colors, he accustoms his eye to the true dimensions and conventions used in various technical drawings, which are copied and tinted by him. The work in Bridge Details, Stereotomy and Stone Cutting is supplementary to the preceding, but instead of copying drawings, the student visits Engineering structures, measures them in detail, and makes working drawings of the same. After a course of lectures on the designing of details, specifications are given the student who is then required to apply his theoretical knowledge in designing railway and highway bridges in wood, iron and steel, and stone and brick

arches, even to the minutest details. In Pen and Colored Topography the student practices the various conventions for map making and applies them in the maps plated from the "land survey" and the "geodetic practice." Under "Graphical Solutions of Strains in Trusses and Arches and Bridge Stresses," the theory leading to graphical treatment is taught and then the student applies his knowledge in the design of trusses and arches. An extended course of applied Mathematics or Mechanics of Engineering is given in which all Engineering problems concerning rigid bodies at rest or in motion, the strength of the materials of Engineering and the disposal of liquids and gases are practically treated. Under Hydraulic, Sanitary and Civil Engineering the construction of works of sewerage and water supply, the disposal of sewage and distribution of water, and of canals and tunnels, foundations in water and on land, and of improvements in rivers and harbors is treated. The manufacture composition and uses of materials of Engineering come under Civil Engineering. In Land Surveying and Leveling, the uses and adjustments of the instruments, and the more recent methods of calculating the content, map making, parting off and dividing up land, and supplying omissions in old surveys are taught. In R. R. Surveying actual field work in preliminary surveying, locating the line and staking out earthwork and foundation pits is done. Office work is given in making plats of the line, profiles, earthwork calculations and estimates of cost. Laboratory work is provided in Chemistry, Mineralogy, Geology and Blowpiping. Students are taught the uses of Astronomical instruments and how to determine time, latitude, azimuth, etc. The Geodetic Practice comes between the final examinations and Commencement. It is proposed to begin with a Topographical Survey of Dog River Valley and gradually extend the survey throughout the State. This is done as a contribution to the U. S. Coast and Geodetic Survey.

Architecture.

The work in the Architectural Course is very similar to that of the Civil Engineering Course. The instruction

given is planned so as to make the Architect independent of the Engineer in staking out work and designing house drainage and ventilation. Work in the same subject in the Civil Engineering Course is taught with special reference to the needs of the Architectural student. Considerable time is given to the design of modern buildings and the student encouraged to put all his extra time in this line of work.

Mathematics.

In the department of Mathematics sufficient attention is paid to practical applications to enable students to see the utility of their studies and to assist them in the scientific professions.

Theory is also developed in as careful and complete a manner as possible in order that the student may receive that mind discipline which is so invaluable an equipment for all pursuits, whether technical or general.

The clearest and most concise text-books are sought for; abstruse and unprofitable discussions are avoided: original work is encouraged and students are called on for personal recitations more frequently than in most institutions of similar character.

Geology and Mineralogy.

The treatment of Geology consists of work in text-book with recitations, supplemented by frequent excursions in the field, in which the many interesting features in which the region is rich are examined. Maps representing the geological formations of counties or larger sections are required in colors. Mineralogy is taken up by recitations upon descriptions of minerals, the student being required to identify minerals by their physical properties. In connection with this work each student is required to make a collection of fifty minerals which he will determine and classify. To aid him in this work he is given instruction in Blow Pipe Analysis and Determinative Mineralogy.

Modern Languages.

The work in Modern Languages is such as to insure the students having a thorough knowledge of the ground work and grammar of the languages, after which stud-

ics in the literature of the languages is taken up. Stress is laid upon the necessity of composition and written exercises are required from students. Conversational practice is also taken to develop pronunciation and familiarity with idioms.

Physics.

The treatment of Physics consists of text-book work with frequent experiments. The work in Mechanics is still further treated under a separate head. Especial attention is given to Electricity and Magnetism and the student is required to do actual work in wiring, etc., making computations of resistance in telegraph and electric light wires. He is also taught the principles of various electrical machines and is encouraged to make models. The class is also taken to visit electric plants where the principles taught in the class room are practically applied.

Classics.

It is the aim of the Classical Department to make the work as thorough as possible and to drill the students particularly in parsing and constructing. In this manner not only a thorough knowledge of the language is obtained but the greatest amount of mental discipline possible is derived. The similarity and connection between the Latin and Greek on the one hand and the English on the other are shown and commented upon by the professor. The Greek and Latin roots from which our English words are derived, are pointed out. Care is taken that the student translate into good English, and he thus improves his knowledge of English in the study of the Classics.

Chemistry.

The study of Chemistry is begun by students in all courses, except that of Arts, in the Freshman year. It consists during this year of lectures upon general Inorganic Chemistry in which the principles of the science are brought out and fully illustrated. Following this is a description of the properties of elements and compounds and methods used for preparing them. To bring this work more clearly before the student a large

number of experiments is performed before the class, in many of which the students are permitted to assist, thereby gaining a much better idea of the subject than would be possible by any other method of instruction. The second year's work is intended for those who take the Chemical Course and consists of daily laboratory practice together with recitations and lectures upon Chemical Technics. The work of this and of the following years is performed by the students themselves under the direction of the professor and his assistant. Qualitative examinations of minerals, commercial products, fertilizers, drugs and medicines are made and as the student becomes more advanced Quantitative examinations of the same substances are made. For those students desiring to fit themselves for the study of Medicine and Pharmacy special instruction is provided in the Chemical Laboratory.

Finally.

It is the aim in all of the departments of the University to teach students the practical application of what they learn. Mere theories are of little value unless the student can apply them successfully. Too many college graduates have failed in their professions from being unable to apply theory to practice, and it is this lack which we endeavor to supply in our students.

BRIEF SKETCH OF NORWICH UNIVERSITY.

This Institution was founded by Capt. Alden Partridge, of whom a cut appears on the cover of this Catalogue, in 1819, and was known as the American Literary, Scientific and Military Academy. It retained the name until November 6, 1834, when a charter of incorporation was granted it by the State of Vermont under the name of Norwich University.

Thus was founded the FIRST Scientific, Classical and Military College in the Union. This new departure met

with universal favor and its halls were soon crowded with young men from every State in the Union.

In March, 1866, the University buildings at Norwich were destroyed by fire and the University was removed to Northfield, Vt., where the citizens offered fine grounds and commodious barracks. Here the same system of instruction and military discipline is maintained, and many young men have been enabled to go forth to fill high positions in various professions.

This was the first institution in the country to lay down a purely scientific course of study, and up to the time of the Rebellion the only one which embraced in its curriculum thorough Military, Classical and Scientific courses. By her work for half a century, Norwich University merits the general confidence of the public. Special attention having been given to Military Science and Engineering, her graduates have become particularly distinguished as army officers and civil engineers, some having risen to the foremost ranks of military commanders.

The Roster of Alumni and Past Cadets contains more than fifteen hundred names, and the Institution is to-day in a most prosperous condition.

SCHOLARSHIPS.

The State Legislature has provided for thirty free scholarships according to the following act from the laws of 1884:

AN ACT RELATING TO THE APPOINTMENT OF CADETS TO NORWICH UNIVERSITY.

SEC. 1. There shall be admitted, free of charge for tuition and room rent, to the Norwich University, at Northfield, as many students from each county in the State as there are Senators from such county in the general assembly, who shall be instructed in all departments of learning taught in said University, and be subject to all the rules and regulations of said school.

SEC. 2. The senators in each county shall designate and appoint the cadet or cadets from such county to the said University, and, whenever a vacancy occurs from such county for any cause, fill the same; said appointments to be made by competitive examination, in the month of June in each year, and whenever a vacancy shall exist.

SEC. 3. Whenever the senators from any county shall fail to fill any vacancy from such county for one month after being notified of the same by the trustees of said University, the trustees may fill the same by appointing from the county if there are any applicants who pass the examination required by the rules of said University, and if not, then from any county in the State.

SEC. 4. The auditor of accounts shall draw his order on the treasurer of the State, payable to the trustees of said University or the treasurer thereof, for the sum of fifty dollars for each cadet so attending said University, appointed as above, which shall be in full payment for tuition and room rent for such cadets, said tuitions to be payable in conformity with the rules of said University now existing as to the payment of tuitions, on the sworn statement of account of the president or vice president of said University, and to be paid by the first day of June in each year.

SEC. 5. This act shall take effect from its passage.

Approved November 25, 1884.

In addition to the above there have been created twelve half scholarships by benevolent friends of the University.

Young men desiring to take advantage of these cadetships hereby offered, should address the SUPERINTENDENT at Northfield.

GENERAL INFORMATION.

Expenses.

A prominent feature of the University is the very reasonable charges for instruction and the low expense of living. The charge is placed at $65 per year, which includes instruction, room rent and incidentals. Students obtain board at from $2.50 to $3.00 per week, which makes the whole expense cheaper than the living expenses alone in cities, and at other institutions of learning.

The following table gives a statement of the expenses:

Tuition per College Year,	$45 00
Room-rent,	15 00
Library and Contingent Expenses,	5 00

The charge for room-rent is based upon the supposition that two students occupy the same room. Cadets furnish their own rooms.

Injury to the property of the college will be repaired at the expense of the cadet causing it; but the damage will be equally assessed upon all members of the corps if the perpetrator be unknown. Every cadet will be held responsible for any injury done in his own room.

Cadets who are appointed musicians will have their tuitions remitted.

Bills are payable strictly in advance.

Students in the course in Chemistry are required to deposit $10 at the beginning of each term of the Sophomore year, and $15 at the beginning of each term of the Junior and Senior years, the amount not consumed being returned at the end of each term. In the other courses a fee of $5 per term is charged for Qualitative Analysis and $3 per term for Blow-pipe Analysis. These charges are for chemicals and do not include breakages or waste of materials. The average expense to students in the Chemical course, for materials, is from $6 to $8 per term.

The Central Vermont Railroad allows half fare.

The Passumpsic Railroad allows free return checks to students paying full fare in coming to attend the University.

For further information address either the ACTING PRESIDENT, or CHARLES C. BRILL, Superintendent, at Northfield, Vt.

Bureau of Information.

There has recently been established by the University, a Bureau of Information. It is intended that this Bureau shall serve in assisting graduates in obtaining desirable positions as Teachers, Engineers, Architects and Chemists. Those of the Alumni who desire such positions should send their addresses to the Superintendent, that they may receive the benefit of the numerous applications for men which the University is constantly in receipt of. The value of this feature since its establishment last year is attested by the comparatively large number of graduates who have found lucrative positions, without trouble or expense.

Rhetoricals.

Friday afternoon of each week is devoted by the entire corps of cadets to rhetorical exercises in which each cadet is required to take part, coming on every third week. The exercises are varied, consisting of declamations, essays general and technical, orations, debates, book reviews, presentation and acceptance speeches. Much stress is laid upon the subject of extemporaneous speaking. Each cadet is required to rehearse before a member of the faculty before appearing publicly. At the close of each rhetorical session the members of the faculty make criticisms and suggestions upon the work done. In place of the regular rhetorical work the corps from time to time organizes itself into a Senate or other deliberative body, thus gaining a familiarity with parliamentary law. Such drill cannot fail to materially assist graduates in taking prominent public positions.

Fire Drill.

The cadets are thoroughly organized as a fire brigade

and are frequently called out for practice. At the sound of the bugle Fire Call every cadet knows exactly what he is to do and immediately sets about it without loss of time.

The Reveille.

The cadets edit and conduct a monthly magazine devoted to the interests of the University, the Alumni and the Corps itself. Upon this paper excellent drill is afforded the cadets in exact and careful writing.

Student's Societies.

Two literary societies exist among the students, in which valuable work is done and at the same time social improvement cultivated. These societies are in every way approved by the authorities.

Students Entering

should report upon arrival to the Superintendent who will give them all necessary instructions as to examinations, etc. The Superintendent will also assign each new student to some member of the faculty who shall act as his

Adviser

in all matters pertaining to University duties and to whom the student may go at any time for advice.

Spring Encampment.

At the close of the spring term and during the week immediately preceding that of Commencement, the entire corps will go into camp upon the parade ground and will there receive instruction in all the details of camp life together with guard duty. While in camp a general review of all the drills will be made to insure familiarity with the same.

Religious Features.

Prayers are held before the opening of academic exercises on each week day morning. Upon Sunday morning each cadet is required to attend divine service with some one of the village congregations, the choice being made at the beginning of the term by the cadet himself if of age, or otherwise, by his parents or guar-

dians, and adhered to throughout the term. The societies of the village to which choice is thus limited are: Congregationalist, Episcopal, Methodist, Roman Catholic and Universalist. While cadets are held to a strict observance of the rules for religious exercises, and while all immoralities are carefully guarded against, yet the institution is in every respect non-sectarian.

Cadet Band.

The cadets have organized and support a Cornet Band of fifteen pieces, which is a very pleasant and important feature of the institution, being essential to parade and marches and at the same time furnishing a pleasant and profitable diversion for the cadets themselves.

Honorable Mention.

The student having the highest general average in his class for the year, shall, providing such average be at least 90 per cent, receive honorable mention at the annual Commencement and the honor list shall be printed in the annual Catalogue.

Senior Medallist.

The member of the Senior class who shall graduate with the highest general study average shall receive the Faculty Gold Medal.

Conditions.

No student deficient in fifteen or more hours work at the end of any year shall be allowed to enter the next class until such work is made up and no condition will be allowed to stand longer than one year. Any deficiency shall debar a student from entering the last term of the Senior year.

Preparatory Department.

Experience having taught us that students can be better prepared for the University under the immediate direction of the faculty, we have established a Preparatory Department to which students will be admitted at any time during the year.

Endowment.

The plan for increased endowment which has been

presented to the friends of the University has met with a hearty reception and quite an amount has already been subscribed. With the rapid growth of the institution and the large increase in the number of students, which has nearly doubled within the past year, new and greater demands are made upon her. To meet these demands a larger endowment will be necessary and it is earnestly hoped that the Alumni and friends of Norwich University will do their part towards assisting the institution.

Military Feature.

Throughout the history of the University there has been maintained a very high standard of Military excellence. From the first it has held the distinction of being the foremost Military institution in the land with the exception of the National Academy. The following from Gen. W. T. Sherman's speech before Ransom Post, St. Louis, Mo., will sustain the above statement regarding this University. In speaking of General T. B. Ransom, he says, "He became principal of Norwich University THEN, as SINCE, an Academy of great renown. This military school at one time almost rivaled the National Military Academy of West Point, and there many a man who afterwards became famous in the Mexican and Civil wars first drank in the inspirations of patriotism and learned the lessons of the art of war." The reputation of the New England regiments must be attributed to discipline and instruction received at this institution, as much as to any other single factor; and the "Green Mountain Boys" owe their national reputation and success largely to their training within her halls. Her Honor Roll in the late Civil war contains the names of twelve generals (among them Gens. Dodge, Buel, Seymour, Wright, Ransom;) twenty-five colonels, forty field officers, fifty-five captains, one hundred and forty-three lieutenants, and a long list of non-commissioned officers. It has been the highest endeavor of the trustees and faculty to maintain in every respect the Military reputation of the University. Attention to the course of Military Instruction (page 9,) will give a fair idea of the

training given; and a copy of the Rules and Regulation will give a complete idea of the duties required of Cadets.

Academic Year and Recess.

The College year begins the second Thursday in September, and closes the second Thursday in June. There will be a recess of two weeks, commencing the Thursday before Christmas and one of one week, commencing the Thursday before Fast-Day.

Standing, Military Customs, Etc.

Academic standing depends upon recitations: Military standing, upon marks of merit and demerit, together with proficiency in military duties. Immoralities, technical and minor offences, are marked with demerit and are punishable in other ways. Wherever pure academic duties require variation in special matters, the analogies of military usage are maintained, so far as practicable. The students are called cadets, and are under military discipline. The cadet officers are appointed on the basis of military and academic standing. Every cadet is required to wear the uniform of the University when on duty.

Uniforms.

A single-breasted dress-coat of dark blue cloth, University buttons; trousers, dark blue, with light blue stripe; black cravat; U. S. regulation helmet, with usual gilt ornament; forage cap; boots, or high shoes of black unglazed leather. The Commandant can furnish accurate directions for the tailor's use, if desired. The uniform can doubtless be made better and more cheaply at Northfield, than elsewhere. These uniforms are as durable as any wearing apparel, and are no more expensive than ordinary clothing such as becomes students. Sufficient time is given for students to wear out their citizen's suits, before they are required to procure uniforms.

The Last Commencement

closed one of the most prosperous years in the history of the University. General Wm. W. Grout delivered the

oration before the Trustees upon Commencement day, after which Gov. E. J. Ormsbee who was present with staff, made a few remarks in which he congratulated the University upon her past history and the bright prospects of the future. In the afternoon the Governor and staff reviewed the corps and at the close of the drills complimented the cadets in the highest terms, upon their fine appearance and their execution of the drills.

Library and Collection.

The University library while not containing as many volumes as those of many colleges, is nevertheless very well supplied with works of reference and in addition contains many works of great value which are not to be found in newer libraries. Our mineral collection is small but is growing rapidly. Manufacturers, dealers in building materials and others are requested to send specimens of their products, to the Department of Engineering. Specimens in Natural History, Minerals, etc., will be gratefully received by the Secretary of the Faculty. Alumni, Past Cadets, Authors and Publishers are earnestly requested to contribute their publications to the University Library.

Recognition by State and General Governments.

The fact that the State of Vermont has recognized Norwich University by making her Corps of Cadets a part of the State Militia and by granting her free scholarships shows the extent to which the State government values the institution as a training school for the citizen soldier and attests her gratitude for services already rendered. For like reasons the U. S. government has detailed two of its active army officers for duty at the University. One as Professor of Military Science and the other as Signal Service Observer and Instructor in Military Signalling.

Resident in Barracks.

The Superintendent resides in the barracks with the cadets, thus insuring a strict observance of rules and regulations.

Location.

Northfield is located on the main line of the Central

Vermont railroad and is easy of access from all directions, and students are given half fare rates upon application. Telegraphic communication can be had directly with the University building, through the Western Union Company. There is probably no State that can boast of a more healthful climate, purer water and greater longevity than Vermont. Northfield is the center spot of the State of Vermont and is ten miles from the capital, Montpelier. A popular resort in summer, it loses none of its healthfulness in winter. The water is pure and clear and the University and village are well supplied by private systems of pure spring water,

DAILY ROUTINE OF DUTY.

FORENOON:—Reveille, First Call, 6:05; Reveille, 6:15; Inspection of rooms by Officer of Day, 6:40; Breakfast Call, 6:45; Prayers, First Call, 8:30; Prayers, 8:45; Recitation and Study hours, 9:00 to 12:00; Dinner Call, 12:00.

AFTERNOON:—Roll Call, First Call, 1:30; Roll Call, 1:35; Recitation and Study hours, 1:45 to 3:45; Fatigue Call, 3:45; Drill, First Call, 4:00; Inspection of rooms by Adjutant; Drill, 4:10 to 5:00; Recall, 5:10; Recreation from Recall until Retreat; Retreat at sunset, except when sun sets before 7:00; then at 7:00; Call to Quarters 15 minutes after Retreat, except when Retreat is at sunset, then immediately after Retreat; Study hours from Call to Quarters until Tattoo, Tattoo, 9:30 in Spring and Fall, at 9:00 in Winter; Taps, 30 minutes after Tattoo. Taps are followed by an Inspection by the Officer of Day who will see that Cadets are in Quarters, lights are out and fires secured.

On Fridays Retreat is at five minutes after Drill, and Permits will be granted to leave quarters during early evening. Saturdays and Sundays there is no 1:35 Roll Call nor Recitations.

CALENDAR—1887-88.

FALL TERM, 1887.

September 8, Thursday:—Entrance Examination and Registration.
November 23-28:—Thanksgiving Recess.
December 19-22:—Term Examinations.
December 22, Thursday:—Term ends.

WINTER TERM, 1888.

January 5, Thursday:—Entrance Examination and Registration.
February 22, Wednesday:—Washington's Birthday.
March 19-22:—Term Examinations.
March 22, Thursday:—Term ends.

SPRING TERM, 1888.

March 29, Thursday:—Entrance Examination and Registration.
May 1, Tuesday:—Seniors will present graduation theses.
May 30, Wednesday:—Decoration Day.
May 31, Thursday:—Senior Examinations.
June 4-6:—Final Examination.
June 7:—Annual Encampment begins.
June 13, Wednesday:—Junior Exhibition.
June 14, Thursday:—Annual Commencement.
June 15, Friday:—Entrance Examination.

FALL TERM, 1888.

September 13, Thursday:—Entrance Examination and Registration.
December 17-20:—Term Examinations.
December 20:—Term ends.

N. U. CADET BAND.

Sergt. W. E. Terrill,	Drum Major
Mus. H. J. Dane,	Leader

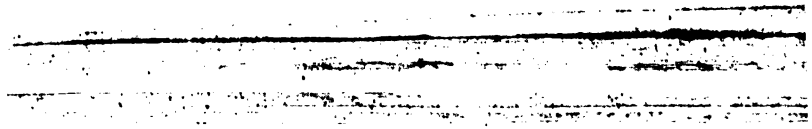
INSTRUMENTATION.

Lieut. F. F. Hayward,	Solo B♭ Cornet
Mus. H. J. Dane,	E♭ Cornet
Lieut. W. A. Shaw,	1st B♭ Cornet
P. G. Smith,	Piccolo
H. Dressel, Jr.,	Solo E♭ Alto
Corp. E. A. Aseltine,	1st E♭ Alto
G. L. Ballou,	2nd E♭ Alto
W. H. Sprague,	1st B♭ Tenor
R. A. Child,	2nd B♭ Tenor
Lieut. H. H. Goss,	Baritone
Sergt. A. R. Shaw,	Tuba
Corp. E. W. Gilman,	Bass Drum
Lieut. F. T. Austin,	Tenor Drum

Norwich University,

Northfield, Vermont.

1889.







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Fifty-Fifth Annual Catalogue

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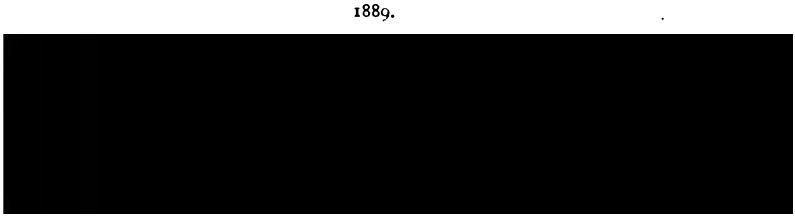
NORWICH UNIVERSITY

Military, Scientific and Classical.

NORTHFIELD, VERMONT.



MONTPELIER, VT.:
ARGUS AND PATRIOT BOOK AND JOB PRINTING HOUSE.
1889.



Corporation.

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Acting President.
HON. GEORGE NICHOLS, M. D., LL.D.

Secretary,
P. D. BRADFORD, A. M., Ph. D.
NORTHFIELD, VT.

Treasurer,
J. C. B. THAYER, ESQ.

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WM. B. MAYO, M. D.,	Northfield.
HON. GEORGE L. SPEAR,	Braintree.
HON. FRANK PLUMLEY,	Northfield.
} *To be elected by Alumni.*	

Faculty.

HON. GEORGE NICHOLS, M. D., LL.D.,

ACTING PRESIDENT.

CHARLES C. BRILL, A. M.,

SUPERINTENDENT.

JOHN B. JOHNSON, A. M.,
Professor of Mathematics, Astronomy and French.

CHARLES C. BRILL, A. M.,
Professor of Chemistry, Physics and Natural Sciences.

EDWARD H. CATLIN, 1st LT. 2nd ARTY. U. S. A.,
Professor of Military Science.

HENRY J. COX, A. M.,
Professor of Greek and Latin.

LYLE F. BELLINGER, C. E.,
Professor of Civil Engineering, Architecture and German.

ASA HOWE, A. M., C. E.,
Professor of Engineering and Field Work.

PHILANDER D. BRADFORD, A. M., Ph. D.,
Professor of Anatomy and Physiology.

GEORGE NATHANIEL CARPENTER, A. M.,
Lecturer on Commercial Ethics.

FRANK PLUMLEY, LL.B.,
Lecturer on Constitutional and Commercial Law and Social Science.

WILLIAM LINE, SERGT. SIGNAL CORPS, U. S. A.,
Instructor in Meteorology and Military Signaling.

LUTHER B. JOHNSON, B. S.,
Instructor in English.

AURIN R. SHAW,
Assistant in Chemical Laboratory and Assistant U. S. Signal Service Observer.

Military Staff.

EDWARD H. CATLIN, 1st Lt. 2nd Arty. U. S. A.,
COMMANDANT.

JOHN B. JOHNSON, 1st Lieut. N. G. V.,
QUARTERMASTER.

LYLE F. BELLINGER, 2nd Lieut. N. G. V.,
ADJUTANT.

WILLIAM LINE, Sergt. Signal Corps U. S. A.,
SIGNAL SERVICE OBSERVER.

PHILANDER D. BRADFORD,
SURGEON.

Rev. HOMER WHITE,
CHAPLAIN.

Requirements of Admission.

All candidates for admission to the college must be at least fifteen years of age, and must present satisfactory evidence of good moral character.

TO THE COURSES IN CIVIL ENGINEERING, ARCHITECTURE, CHEMISTRY, AND SCIENCE AND LITERATURE.

Candidates will be examined in the following studies:—

MATHEMATICS.—Arithmetic; Algebra to Quadratics; Plane Geometry.

ENGLISH LANGUAGE.—Grammar; Composition, with special attention to punctuation and the use of capitals.

GEOGRAPHY.—Physical and Political Geography.

HISTORY.—History of the United States.

TO THE COURSE IN ARTS.

In addition to the examinations in Mathematics, English Language, Geography and History laid down for the courses in Science, examinations will be as follows:—

LATIN.—Cæsar's "Commentaries," four books, or Sallust's "Catiline"; Virgil's "Æneid," six books; Cicero, four orations.

GREEK.—Xenophon's "Anabasis," four books, or one hundred pages Goodwin's Greek Reader; Homer's "Iliad," two books.

Graduates from approved High Schools will be admitted upon certificates.

Candidates not fully prepared in all the requirements, will be conditioned for a limited time, or placed in a preparatory class.

ADVANCED STANDING.

Candidates for advanced standing will be examined in all the previous studies of the course; and if they come from another institution, will present certificates of honorable dismission.

Courses of Instruction.

COURSE IN MILITARY INSTRUCTION.

For all Students throughout the Four Years. Exercises, Drills or Lectures every day at 4 o'clock P. M.

FALL TERM.

Settings Up, Calls, Manual of Arms, School of the Company and Skirmish Drill; Bayonet Exercises indoors in bad weather.

WINTER TERM.

Broadsword and Sabre Drill, Manual of the Sword and Fencing. Juniors and Seniors, Lectures on Military Engineering or Military Science and Art of War.

SPRING TERM.

Artillery Drill and School of the Battery, Battalion Drill, Ceremonies and Dress Parade, Review of all Drills, Signaling, Lectures on Customs of the Service, Camping and Modern Warfare, Rifle Practice.

The lectures in Military Science and Modern Warfare embody ancient warfare and tactics, field fortification, field engineering, military tactics, artillery duty, principles of gunnery; the attack and defence of fortified places, operations of the siege; attack and defence of a province, and principles of base line of operations, torpedo service and other modern means of warfare. These lectures will be illustrated by maps and charts of modern sieges and battles. The lectures in Military Science alternate every other year with those in Modern Warfare, which requires the Junior and Senior classes to attend them.

Military discipline is exercised throughout, and the strictest observance of military customs required of Cadets.

Cadets assume the duties of Adjutant, Officer of Day, Guard, etc., in their turn, and are instructed to make out correctly the different descriptions of military reports; and, in short, all the duties incident to the field or garrison.

Military exercises and duties are so arranged as not to occupy any of the time that would otherwise be devoted to study. They are attended to at those hours which are generally passed by students in idleness, or devoted to useless amusements; for which they are made a pleasant, healthful and profitable substitute. They develop those manly arts and a bearing that always characterizes a soldier, and afford excellent physical training.

Military training prepares a young man for emergencies everywhere met; securing not only to himself but to his country, protection against mobs, riots, strikes and insurrections of every-day occurrence, and which can be met in no other way.

These facts bring strongly to mind the advantage and necessity of a military education.

Examinations will be held in tactics, orders, duties and customs of Military Service, to insure familiarity and their prompt execution.

Courses of Study.

Five regular courses have been established, as follows:—

I. A course in Civil Engineering.
II. A course in Architecture.
III. A course in Chemistry.
IV. A course in Science and Literature.
V. A course in Arts.

The first three of these have a distinctly practical bearing, and give a thorough training for most of the scientific professions.

The course in Science and Literature is established for such as may not wish to pursue a full course in Mathematics, nor one for a distinctly scientific profession, and is designed to furnish a liberal preparation for business pursuits.

Each of these courses extends through four years, and is intended to give to the students a liberal culture.

Changes are made in the course in Chemistry to meet the wants of students preparing for Medicine and Pharmacy.

Courses in Science.

FRESHMAN YEAR.

FOR ALL COURSES EXCEPT IN ARTS.

NOTE.—The figures after each subject indicate the number of recitations per week, or its equivalent.

NOTE.—Two hours' work in laboratory, field, and drafting room are equivalent to one hour in recitation.

FALL TERM.—Algebra, 5; *French or German or Latin, 5; Inorganic Chemistry, 3; Rhetoric, 2; Free Hand Drawing, 5.

WINTER TERM.—Geometry, 5; French or German or Latin, 5; Inorganic Chemistry, 3; Rhetoric, 2; Perspective, 3; Lettering, 2.

SPRING TERM.—Trigonometry, 5; French or German or Latin, 5; Inorganic Chemistry, 3; Rhetoric, 2; Geometrical Drafting, 3; Projection, 2.

I. THE COURSE IN CIVIL ENGINEERING.

Leading to the Degree of Civil Engineer.

SOPHOMORE YEAR.

FALL TERM.—Analytical Geometry, 5; French or German, 3; Mechanics and Heat, 5; Descriptive Geometry (text), 3; Descriptive Drafting, 2; Pen Topography, 2.

*Subject to approval of Faculty throughout all courses.

WINTER TERM.—Differential Calculus, 5; French or German, 3; Electricity and Magnetism, 5; Descriptive Geometry, 3; Descriptive Drafting, 2; Tinting and Shading, 2.

SPRING TERM.—Integral Calculus, 5; Land Surveying, Leveling and Field Work, 5; French or German, 3; Acoustics and Optics, 5; Colored Topography, 2.

JUNIOR YEAR.

FALL TERM.—Mechanics of Engineering, 5; Geology, 5; Shades and Shadows, 2; Detail Drawing, Tracings and Blue Prints, 3; Railroad Surveying, 6 (text, 2; field work, 4).

WINTER TERM.—Mechanics of Engineering, 5; Mineralogy, 3; Blow-pipe Analysis, 2; Wet Analysis, 5; Graphics of Trusses and Arches, 5 (text, 2; drafting, 3).

SPRING TERM.—Bridge Stresses, 5; Botany, 3; Political Economy, 5; Architectural Drafting, 3; Stereotomy and Stone Cutting, 2; Meteorology, 2.

SENIOR YEAR.

FALL TERM.—Hydraulics, 5; Commercial Law, 5; Metallurgy, 2; Bridge Designing, 5; Economic Railway Location, 3.

WINTER TERM.—Electrical Engineering, lights, dynamos, alarms, house wiring, etc., 5; International Law, 5; Hydraulic and Sanitary Engineering, 5; Civil Engineering, 3.

SPRING TERM.—Spherical Astronomy, determination of time, latitude, etc., 5; Contracts, Specifications, etc., 2; Civil Engineering and Engineering Projects, 5; Preparation of Thesis, 5.

II. COURSE IN ARCHITECTURE.

Leading to the Degree of Bachelor of Science in Architecture.

The Freshman and Sophomore years of this course are identical with the first two years of the course in Civil Engineering.

JUNIOR YEAR.

FALL TERM.—Mechanics of Engineering, 5; Detail of Building, 5; Blue Prints and Tracings, 2; Shades and Shadows, 2; Geology, 5.

WINTER TERM.—Mechanics of Engineering, 5; Graphics of Roof Trusses and Arches, 5 (text, 2; drafting, 3); Mineralogy, 3; Blow-pipe Analysis, 2; Wet Analysis, 5.

SPRING TERM.—Architectural Drafting, 5; Stereotomy and Stone Cutting, 5; Politicai Economy, 5; Lectures on Egyptian, Grecian and Roman Architecture, 5.

SENIOR YEAR.

FALL TERM.—Hydraulics, 5; Designing, 5; Architectural Decorations, 3; Commercial Law, 5; Metallurgy, 2.

WINTER TERM.—Electrical Engineering, lights, dynamos, alarms, house wiring, etc., 5; Construction, 3; Hydraulic and Sanitary Engineering, 5; International Law, 5; Ventilation and Warming, 2.

SPRING TERM.—Modern Architecture and designing, 10; Contracts, Specifications, etc., 2; Preparation of Thesis, 5.

III. COURSE IN CHEMISTRY.

Leading to the Degree of Bachelor of Science in Chemistry.

SOPHOMORE YEAR.

FALL TERM.—Chemical Technics, 5; French or German or Latin, 3; Mechanics and Heat, 5; Qualitative Analysis, 5.

WINTER TERM.—Qualitative Analysis, 5; French or German or Latin, 3; Electricity and Magnetism, 5; Blow-pipe Analysis, 5.

SPRING TERM.—Botany, 3; French or German or Latin, 3; Acoustics and Optics, 5; Qualitative Analysis, 5; Land Surveying, 5.

JUNIOR YEAR.

FALL TERM.—General History, 5; Geology, 5; Organic Chemistry, 2; Qualitative Analysis of rare Minerals, 7.

WINTER TERM.—Logic, 5; Zoology, 3; Mineralogy, 3; Organic Chemistry, 2; Quantitative Analysis, 7.

SPRING TERM.—English Literature, 5; Industrial Chemistry, 5; Organic Chemistry, 2; Quantitative Analysis, 7.

SENIOR YEAR.

FALL TERM.—Commercial Law, 5; Agricultural Chemistry, 5; Metallurgy, 2; Toxicology, 5; Medical Chemistry, 5.

WINTER TERM.—International Law, 5; Assaying, 2; Water Analysis, 5; Commercial Chemistry, 7.

SPRING TERM.—Political Economy, 5; Gas Analysis, 5; Thesis, 5.

IV. COURSE IN SCIENCE AND LITERATURE.

Leading to the Degree of Bachelor of Literature.

SOPHOMORE YEAR.

FALL TERM.—History of England, 5; French or German or Latin, 3; Mechanics and Heat, 5; Themes, 2; Pen Topography, 2.

WINTER TERM.—Themes, 3; French or German or Latin, 3; Electricity and Magnetism, 5; Analytical Chemistry, 5.

SPRING TERM.—French or German or Latin, 3; Acoustics and Optics, 5; Analytical Chemistry, 5; Botany, 3.

JUNIOR YEAR.

FALL TERM.—French or German or Latin, 5; Geology, 5; General History, 5.

WINTER TERM.—French or German or Latin, 5; Mineralogy, 3; Blow-pipe Analysis 2; Logic, 5; Zoology, 3.

SPRING TERM.—French or German or Latin, 5; Astronomy, 5; English Literature, 5; Land Surveying, 5.

SENIOR YEAR.

FALL TERM.—French or German or Latin, 3; American History, 5; Commercial Law, 5; Metallurgy, 2.

WINTER TERM.—French or German or Latin, 3; Mental and Moral Philosophy, 3; International Law, 5; Elements of Criticism, 5.

SPRING TERM.—French or German or Latin, 3; Political Economy, 5; Contracts and Specifications, 2; Thesis, 5.

V. COURSE IN ARTS.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

FALL TERM.—Algebra, 5; Memorabilia and Greek Prose, 5; Livy and Latin Prose, 5; Rhetoric, 2; Free Hand Drawing, 5.

WINTER TERM.—Geometry, 5; Herodotus, 5; Cicero Tusculan Disputations and Roman History, 5; Rhetoric, 2; Perspective, 3; Lettering, 2.

SPRING TERM.—Trigonometry, 3; Homer's Odyssey and Grecian History, 5; Horace's Odes, 5; Rhetoric, 2; Geometrical Drafting, 3; Projection, 2.

SOPHOMORE YEAR.

FALL TERM.—Sophocles, 5; Juvenal's Satires, 5; Mechanics and Heat, 5; Pen Topography, 2.

WINTER TERM.—Euripides, 5; Tacitus, 5; Electricity and Magnetism, 5.

SPRING TERM.—Æschylus, 5; Tacitus, 5; Acoustics and Optics, 5; Botany, 3.

JUNIOR YEAR.

FALL TERM.—Demosthenes, 2; Pliny, 3; Geology, 5; French or German, 5; Inorganic Chemistry, 3.

WINTER TERM.—Plato, 2; Plautus, 3; Logic, 5; Inorganic Chemistry, 3; French or German, 5.

SPRING TERM.—Greek Syntax, 2; Latin Syntax, 3; French or German, 5; Inorganic Chemistry, 3; Astronomy, 5.

SENIOR YEAR.

FALL TERM.—Land Surveying, 5; Analytical Chemistry, 5; French or German, 3; Commercial Law, 5.

WINTER TERM.—Mineralogy, 3; Blow-pipe Analysis, 2; French or German, 3; International Law, 5; Elements of Criticism, 5; Mental and Moral Philosophy, 3.

SPRING TERM.—Zoology, 3; French or German, 3; Political Economy, 5; Thesis, 5.

Composition and Oratory will be pursued in all courses throughout the four years. Original orations are required during the Senior year.

Military instructions throughout all courses the same as laid down in the Military Course (page 6).

Text-Books.

MATHEMATICS.—Astronomy, Young. Algebra, Wentworth's Complete. Analytical Geometry, Loomis. Calculus, Taylor. Geometry, Davies' Legendre. Mechanics, Church. Trigonometry, Davies. Descriptive Geometry, Faunce.

SCIENCES.—Botany, Gray's School and Field Book. Chemistry, Analytical Qualitative, Fresenius. Volumetric Analysis, Sutton. Analytical Quantitative, Fresenius. Blow-pipe, Nason's Elderhorst. Inorganic, Shepard, Organic, Remsen. Physics, Gage's Elementary, with lectures on special subjects. Zoology, Packard. Geology, Winchell's Geological Studies. Mineralogy, Dana's Manual and Foye's Tables.

LANGUAGES.—French, Fasquelle's Complete Course, Knapp's French Readings and Various French Works. German, Otis' Elementary German Course, Whitney's German Grammar and Reader, Hodges' Scientific German, German Literature. Greek, Goodwin's Grammar. Latin, Harkness', and Allen and Greenough's Grammar.

HISTORY.—General History, Webber; Grecian, Smith;

RHETORIC.—Clark. Political Economy, Perry. International Law, Woolsey. Commercial Law, Townsend. Logic, Jevons. Moral Philosophy, Janet. English Literature, Welch.

ENGINEERING.—Land Surveying, Carhart. R. R. Surveying, Searles. Bridge Stresses, Greene. Civil Engineering, Mahan and Trautwine. Specifications, Haupt. Hydraulic Engineering, Fanning. Sanitary Engineering, Latham, Philbrick.

Degrees.

The time required for any full course leading to a Degree is four years. Students may enter in advance by passing satisfactory examinations in the studies already gone over by the class they propose to enter, and those required for admission.

Students are allowed to advance as rapidly as they are able, subject to the direction of the Faculty.

The candidate for any degree must deposit with the Faculty a satisfactory thesis on some scientific or literary subject connected with his department.

DEGREES ON GRADUATION.

The Degree of Civil Engineer is conferred upon any student who has completed the course in Civil Engineering, and has passed the required examinations.

The Degree of Bachelor of Science is conferred upon any student who has satisfactorily completed the course in Architecture.

The Degree of Bachelor of Science is conferred upon any student who has completed the course in Chemistry.

The Degree of Bachelor of Literature is conferred upon any student who has satisfactorily completed the course in Science and Literature.

The Degree of Bachelor of Arts is conferred upon any student who has satisfactorily completed the course in Arts.

ADVANCED DEGREES.

The Master's Degree in Science or Arts is conferred upon graduates of this University of three years' standing who have taken the corresponding Bachelor's Degree, and who, during that time, shall have been engaged in professional, literary or scientific pursuits, or have pursued a course marked out by the Faculty, for two years after graduation, and passed the examinations.

The Degree of Master of Civil Engineering may be conferred upon graduates in Civil Engineering of three years' standing, who have pursued the profession of engineering during the time, have passed the requisite examinations, and have presented a satisfactory thesis, or upon graduates who satisfactorily complete an additional course.

Subjects and Methods of Instruction.

ENGINEERING.

The work of the first year in this department is common to all courses. The thorough training of the eye and hand in Freehand Drawing is of the greatest importance in all subsequent drafting. The course embraces accurate outline drawing, elementary perspective, sketching, object drawing, pencil shading and designing. The effort is made to produce designers, instead of mere copyists. Practice in lettering, large and small drawings, general orders, etc., is given in the second term. Neatness of text and rapidity of execution are aimed at. In the third term, dexterity in handling drafting instruments is acquired. Various applications of geometry to drafting, and

the orthographic and isometric projections of joints and splices in wood construction are taught. Descriptive Geometry is taught with special reference to its applications to shades and shadows, machine construction, stone cutting, and to the design of stone bridges, culverts, spiral stairways, sewer intersections, etc.

The course in Bridges begins with tinting and shading of details, which are measured by students in visiting engineering structures, and then drawn to scale. Thus, while the student becomes familiar with the use of brush and colors, he also accustoms his eye to the true dimensions of the various joints. A course of lectures on designing bridge details is given in connection with Graphics, a more extended course in Bridge Stresses is given in the ninth term, and in the tenth term the student is given specifications and required to apply his theoretical knowledge in designing railway and highway bridges of wood, iron and steel, even to the minutest details. In Pen Topography and Colored Topography the students use the conventions for map making, and apply them in the maps platted from the "land" and "railroad surveys."

An extended course in Applied Mathematics, or Mechanics of Engineering is given, in which all engineering problems concerning rigid bodies at rest or in motion, the strength of engineering materials, and the statics and dynamics of liquids and gases, are practically treated. Under Hydraulic, Sanitary and Civil Engineering, the design and construction of water supply and distribution systems, sewerage systems and sewage disposal, and of canals, tunnels, foundations in water and on land, and river and harbor improvements, are treated. In the N. U. Reading Room are placed the best of engineering periodicals, which give descriptions of all new works of special interest, and enable the student to keep up with the most recent methods of construction.

In Land Surveying and Leveling, practice in using and adjusting instruments is given, and the most approved methods

of map making, dividing up and parting off land, and supplying omissions in old surveys are taught. In Railroad Surveying, field work in preliminary surveying, final location, slope staking, etc., is done. Office work is done in making contour maps of the line, profiles, earthwork calculations, estimates of cost, etc. The lectures on Economic Railway Location enable the students to decide between two or more railway lines which have previously been located, and how to reduce expenditures in the operation of lines already built.

EQUIPMENT.—The department has a large collection of designs for Freehand and Perspective Drawing, and of modern houses, cottages, public buildings and architectural details. It has also fine collections of blue prints of the best and most notable bridges recently erected, including pivot draws, plate girders and various types of pin-connected and riveted trusses, and blue prints of sewer details and sewer constructions. It has a large number of models of wooden splices and joints used in bridge construction and carpentry, and of details of machine construction.

The department has procured the best modern instruments for angle and line measurement, levels, rods, chains, etc., and is prepared to give as much of practical engineering field work as can be given in schools, with the first-class instruments now used in modern engineering.

ARCHITECTURE.

The work in the Architectural Course is very similar to that of the Civil Engineering Course. The instruction given is planned so as to make the Architect independent of the Engineer in staking out work and designing house drainage and ventilation. Work in the same subject in the Civil Engineering Course is taught with special reference to the needs of the Architectural student. Considerable time is given to the design of modern buildings, and the student encouraged to put all his extra time in this line of work.

MATHEMATICS.

In the department of Mathematics sufficient attention is paid to practical applications to enable students to see the utility of their studies and to assist them in the scientific professions.

Theory is also developed in as careful and complete a manner as possible, in order that the student may receive that mind discipline which is so invaluable an equipment for all pursuits, whether technical or general.

The clearest and most concise text-books are sought for; abstruse and unprofitable discussions are avoided; original work is encouraged, and students are called on for personal recitations more frequently than in most institutions of similar character.

GEOLOGY AND MINERALOGY.

The treatment of Geology consists of work in text-book, with recitations, supplemented by frequent excursions in the field, in which the many interesting features in which the region is rich are examined. Maps representing the geological formations of counties or larger sections, are required in colors. Mineralogy is taken up by recitations upon descriptions of minerals, the student being required to identify minerals by their physical properties. In connection with this work, each student is required to make a collection of fifty minerals, which he will determine and classify. To aid him in this work he is given instruction in Blow-pipe Analysis and Determinative Mineralogy.

MODERN LANGUAGES.

The work in Modern Languages is such as to insure the students' having a thorough knowledge of the groundwork and grammar of the languages, after which studies in the literature of the languages are taken up. Stress is laid upon the necessity of composition, and written exercises are required from students. Conversational practice is also given to develop pronunciation and familiarity with idioms.

PHYSICS.

The treatment of Physics consists of text-book work, with frequent experiments. The work in Mechanics is still further treated under a separate head. Especial attention is given to Electricity and Magnetism, and the student is required to do actual work in wiring, etc., making computations of resistance in telegraph and electric light wires. He is also taught the principles of various electrical machines, and is encouraged to make models. The class is also taken to visit electric plants, where the principles taught in the class room are practically applied.

CLASSICS.

It is the aim of the Classical Department to make the work as thorough as possible, and to drill the students particularly in parsing and construction. In this manner not only a thorough knowledge of the language is obtained, but the greatest amount of mental discipline possible is derived. The similarity and connection between the Latin and Greek on the one hand, and the English on the other, are shown and commented upon by the professor. The Greek and Latin roots from which our English words are derived, are pointed out. Care is taken that the student translate into good English, that he may thus improve his knowledge of English in the study of the Classics.

CHEMISTRY.

The study of Chemistry is begun by students in all courses, except that of Arts, in the Freshman year. It consists during this year of lectures upon general Inorganic Chemistry, in which the principles of the science are brought out and fully explained. Following this is a description of the properties of elements and compounds and methods used for preparing them. To bring this work more clearly before the student a large number of experiments are performed before the class, in many of which the students are permitted to assist, thereby

gaining a much better idea of the subject than would be possible by any other method of instruction. The second year's work is intended for those who take the Chemical Course, and consists of daily laboratory practice, together with recitations and lectures upon Chemical Technics. The work of this and of the following years is performed by the students themselves, under the direction of the professor and his assistant. Qualitative examinations of minerals, commercial products, fertilizers, drugs and medicines, are made, and as the student becomes more advanced, Quantitative examinations of the same substances are made. For those students desiring to fit themselves for the study of Medicine and Pharmacy, special instruction is provided in the Chemical Laboratory.

FINALLY.

It is the aim in all of the departments of the University to teach students the practical application of what they learn. Mere theories are of little value unless the student can apply them successfully. Too many college graduates have failed in their professions from being unable to apply theory to practice, and it is this lack which we endeavor to supply in our students.

Brief Sketch of Norwich University.

This institution was founded in 1819, by Capt. Alden Partridge, of whom a cut appears on the cover of this Catalogue. and was known as the American Literary, Scientific and Military Academy. It retained the name until November 6, 1834, when a charter of incorporation was granted it by the State of Vermont under the name of Norwich University.

Thus was founded the FIRST Scientific, Classical and Military College in the Union. This new departure met with universal favor, and its halls were soon crowded with young men from every State in the Union.

In March, 1866, the University buildings at Norwich were destroyed by fire, and the University was removed to Northfield, Vt., where the citizens offered fine grounds and commodious barracks. Here the same system of instruction and military discipline is maintained, and many young men have been enabled to go forth to fill high positions in various professions.

This was the first institution in the country to lay down a purely scientific course of study, and up to the time of the Rebellion the only one which embraced in its curriculum thorough Military, Classical and Scientific courses. By her work for half a century, Norwich University merits the general confidence of the public. Special attention having been given to Military Science and Engineering, her graduates have become particularly distinguished as army officers and civil engineers, some having risen to the foremost ranks of military commanders.

The Roster of Alumni and Past Cadets contains more than fifteen hundred names, and the Institution is to-day in a most prosperous condition.

Scholarships.

The State Legislature has provided for thirty free scholarships, according to the following act from the laws of 1884 :—

AN ACT RELATING TO THE APPOINTMENT OF CADETS TO NORWICH UNIVERSITY.

Sec. 1. There shall be admitted, free of charge for tuition and room rent, to the Norwich University, at Northfield, as many students from each county in the State, as there are Senators from such county in the general assembly, who shall be instructed in all departments of learning taught in said University, and be subject to all the rules and regulations of said school.

Sec. 2. The Senators in each county shall designate and appoint the cadet or cadets from such county to the said University, and, when-

ever a vacancy occurs from such county for any cause, fill the same; said appointments to be made by competitive examinations, in the month of June in each year, and whenever a vacancy shall exist.

Sec. 3. Whenever the Senators from any county shall fail to fill any vacancy from such county for one month after being notified of the same by the Trustees of said University, the trustees may fill she same by appointing from the county if there are any applicants who pass the examination required by the rules of said University, and if not, then from any county in the State.

Sec. 4. The Auditor of Accounts shall draw his order on the Treasurer of the State, payable to the Trustees of said University or the Treasurer thereof, for the sum of fifty dollars for each cadet so attending said University, appointed as above, which shall be in full payment for tuition and room rent for such cadets, said tuitions to be payable in comformity with the rules of said University now existing as to the payment of tuitions, on the sworn statement of account of the President or Vice-President of said University, and to be paid by the first day of June in each year.

Sec. 5. This act shall take effect from its passage.

Approved November 25, 1884.

In addition to the above there have been created twelve half-scholarships by benevolent friends of the University.

Young men desiring to take advantage of these cadetships hereby offered, should address the SUPERINTENDENT, at Northfield.

General Information.

EXPENSES.

A prominent feature of the University is the very reasonable charges for instruction and the low expense of living. The charge is placed at $65 per year, which includes instruction, room rent and incidentals. Students obtain board at from $2.50 to $3 per week, which makes the whole expense cheaper than the living expenses alone in cities, and at other institutions of learning.

The following table gives a statement of the expenses:—

Tuition per College Year,	$45.00
Room-rent,	15.00
Library and Contingent Expenses,	5.00

The charge for room rent is based upon the supposition that two students occupy the same room. Cadets furnish their own rooms.

Injury to the property of the college will be repaired at the expense of the cadet causing it; but the damage will be equally assessed upon all members of the corps if the perpetrator be unknown. Every cadet will be held responsible for any injury done in his own room.

Cadets who are appointed musicians will have their tuitions remitted.

Bills are payable strictly in advance.

Students in the course in Chemistry are required to deposit $10 at the beginning of each term of the Sophomore year, and $15 at the beginning of each term of the Junior and Senior years, the amount not consumed being returned at the end of each term. In the other courses a fee of $5 per term is charged for Qualitative Analysis and $3 per term for Blow-pipe Analysis. These charges are for chemicals, and do not include breakages or waste of materials. The average expense to students in the Chemical course, for materials, is from $6 to$8 per term.

The Central Vermont railroad allows half-fare.

The Passumpsic railroad allows free return checks to students paying full fare in coming to attend the University.

For further information address either the ACTING PRESIDENT, or CHARLES C. BRILL, Superintendent, at Northfield, Vt.

BUREAU OF INFORMATION.

There has recently been established by the University, a Bureau of Information. It is intended that this Bureau shall serve in assisting graduates in obtaining desirable positions as Teachers, Engineers, Architects and Chemists. Those of

the Alumni who desire such positions should send their addresses to the Superintendent, that they may receive the benefit of the numerous applications for men, of which the University is constantly in receipt. The value of this feature since its establishment is attested by the comparatively large number of graduates who have found lucrative positions, without trouble or expense.

RHETORICALS.

Friday afternoon of each week is devoted by the entire corps of cadets to rhetorical exercises, in which each cadet is required to take part, coming on every third week. The exercises are varied, consisting of declamation, essays, general and technical orations, debates, book reviews, presentations and acceptance speeches. Much stress is laid upon the subject of extemporaneous speaking. Each cadet is required to rehearse before a member of the Faculty before appearing publicly. At the close of each rhetorical session the members of the Faculty make criticisms and suggestions upon the work done. In place of the regular rhetorical work, the corps from time to time organizes itself into a senate or other deliberative body, thus gaining a familiarity with parliamentary law. Such drill cannot fail to materially assist graduates in taking prominent public positions.

THE REVEILLE.

The cadets edit and conduct a monthly magazine devoted to the interests of the University, the Alumni and the Corps itself. Upon this paper excellent drill in journalism is afforded the cadets.

READING ROOM.

A reading room is maintained by the cadets, which is provided with the leading literary, political and technical periodicals of the day.

STUDENTS' SOCIETIES.

Two literary societies exist among the students, in which

valuable work is done, and at the same time social improvement cultivated. These societies are in every way approved by the authorities.

STUDENTS ENTERING

should report upon arrival to the Superintendent, who will give them all necessary instructions as to examinations, etc. The Superintendent will also assign each new student to some member of the Faculty, who shall act as his

ADVISER

in all matters pertaining to University duties, and to whom the student may go at any time for advice.

SPRING ENCAMPMENT.

At the close of the spring term, and during the week immediately preceding that of Commencement, the entire corps will go into camp upon the parade ground, and will there receive instruction in all the details of camp life, together with guard duty. While in camp a general review of all the drills will be made, to insure familiarity with them. During this encampment considerable time will be devoted to

RIFLE PRACTICE,

in which contests will be held and prizes awarded.

RELIGIOUS FEATURES.

Prayers are held before the opening of academic exercises on each week-day morning. Upon Sunday morning each cadet is required to attend divine service with some one of the village congregations, the choice being made at the beginning of the term by the cadet himself if of age, or, otherwise, by his parents or guardians, and adhered to throughout the term. The societies of the village are: Congregationalist, Episcopal, Methodist, Roman Catholic, and Universalist. While cadets are held to a strict observance of the rules for religious exer-

cises, and while all immoralities are carefully guarded against, yet the institution is in every respect non-sectarian.

Y. M. C. A.

There has recently been established by the students a branch of the Intercollegiate Young Men's Christian Association, which is an organization of students and professors for the promotion of their religious culture and for Christian work in the University.

CADET BAND.

The cadets support a Cornet Band of fifteen pieces, which is a very pleasant and important feature of the institution, being essential to parades and marches, and at the same time furnishing a pleasant and profitable diversion for the cadets themselves.

PRIZE SPEAKING.

Through the generosity of Mr. N. Louis Sheldon, class of '84, two prizes of *Fifteen* and *Ten Dollars*, are offered to those members of the Sophomore and Freshman classes who shall show the greatest merit in declamation in a contest held during Commencement week.

HONORABLE MENTION.

The student having the highest general average in his class for the year, shall, providing such average be at least 90 per cent., receive honorable mention at the annual Commencement, and the honor list shall be printed in the annual Catalogue.

SENIOR MEDALIST.

The member of the Senior class who shall graduate with the highest general study average, shall receive the Faculty Gold Medal.

COMMISSIONED OFFICERS.

Upon graduation, cadet officers receive commissions signed by the President of the University and by the Adjutant and Inspector-General of the State.

CONDITIONS.

No student deficient in fifteen or more hours' work, at the end of any year, shall not be allowed to enter the next class until such work is made up, and no condition will be allowed to stand longer than one year. Any deficiency shall debar a student from entering the last term of the Senior year.

PREPARATORY DEPARTMENT.

Experience having taught us that students can be better prepared for the University under the immediate direction of the Faculty, we have established a Preparatory Department, to which students will be admitted at any time during the year.

ENDOWMENT.

The plan for increased endowment, which has been presented to the friends of the University, has met with a hearty reception, and quite an amount has already been subscribed. With the rapid growth of the institution and the large increase in the number of students, new and greater demands are made upon her. To meet these demands a larger endowment will be necessary, and it is earnestly hoped that the Alumni and friends of Norwich University will do their part toward assisting the institution.

MILITARY FEATURE.

Throughout the history of the University there has been maintained a very high standard of Military excellence. From the first it has held the distinction of being the foremost Military institution in the land with the exception of the National Academy. The following from Gen. W. T. Sherman's speech before Ransom Post, St. Louis, Mo., will sustain the above statement regarding this University. In speaking of General T. B. Ransom, he says: "He became Principal of Norwich University, THEN, as SINCE, an Academy of great renown. This military school at one time almost rivaled the National Academy of West Point, and there many a man who after-

ward became famous in the Mexican and Civil wars, first drank in the inspirations of patriotism and learned the lessons of the art of war." The reputation of the New England regiments must be attributed to discipline and instruction received at this institution, as much as to any other single factor; and the "Green Mountain Boys" owe their national reputation and success largely to their training within her halls. Her Honor Roll in the late Civil war contains the names of twelve Generals (among them Gens. Dodge, Buel, Seymour, Wright, Ransom); twenty-five Colonels, forty field officers, fifty-five Captains, one hundred and forty-three Lieutenants, and a long list of non-commissioned officers. It has been the highest endeavor of the Trustees and Faculty to maintain in every respect the Military reputation of the University. Attention to the course of Military Instruction (page 6) will give a fair idea of the training given, and a copy of the Rules and Regulations will give a complete idea of the duties required of Cadets.

STANDING, MILITARY CUSTOMS, ETC.

Academic standing depends upon recitations; Military standing upon marks of merit and demerit, together with proficiency in military duties. Immoralities, technical and minor offences, are marked with demerits, and are punishable in other ways. Wherever purely academic duties require variation in special matters, the analogies of Military usage are maintained, so far as practicable. The students are called cadets, and are under Military discipline. The cadet officers are appointed on the basis of Military and academic standing. Every cadet is required to wear the Uniform of the University, when on duty.

UNIFORMS.

A single-breasted dress-coat of dark blue cloth, University buttons; trousers dark blue, with light blue stripe; black cravat; U. S. regulation helmet, with usual gilt ornament; forage cap; boots, or high shoes of black, unglazed leather. The

Commandant furnishes accurate directions for the tailor's use, if desired. The uniform can doubtless be made better and more cheaply at Northfield, than elsewhere. These uniforms are as durable as any wearing apparel, and are no more expensive than ordinary clothing such as becomes students. Sufficient time is given for students to wear out their citizen's suits, before they are required to procure uniforms.

LIBRARY AND COLLECTION.

The University library, while not containing as many volumes as those of many colleges, is nevertheless very well supplied with works of reference, and in addition contains many works of great value, which are not to be found in newer libraries. Our mineral collection is small, but is growing rapidly. Manufacturers, dealers in building materials, and others are requested to send specimens of their products to the Department of Engineering. Specimens in Natural History, Minerals, etc., will be gratefully received by the Secretary of the Faculty. Alumni, Past Cadets, Authors and Publishers are earnestly requested to contribute their publications to the University Library.

RECOGNITION BY STATE AND GENERAL GOVERNMENTS.

The fact that the State of Vermont has recognized Norwich University by making her Corps of Cadets a part of the State Militia and by granting her free scholarships, shows the extent to which the State government values the institution as a training-school for the citizen soldier, and attests her gratitude for services already rendered. For like reasons the U. S. Government has detailed two of its active army officers for duty at the University, one as Professor of Military Science and the other as Signal Service Observer and Instructor in Military Signaling.

RESIDENT IN BARRACKS.

The Superintendent resides in the barracks with the cadets, thus insuring a strict observance of rules and regulations.

LOCATION.

Northfield being located on the main line of the Central Vermont railroad, is easy of access from all directions, and students are given half-fare rates upon application. Telegraphic communication can be had directly with the University building, through the Western Union Company. There is probably no State that can boast of a more healthful climate than Vermont. Northfield is in the central part of the State, and is ten miles from the Capital, Montpelier. A popular resort in summer, it loses none of its healthfulness in winter. The water is pure and clear, and the University and village are well supplied by private systems of pure spring water.

Daily Routine of Duty.

FORENOON.—Reveille, First Call, 6 :05 ; Reveille, 6 :15 ; Inspection of rooms by Officer of Day, 6 :40 ; Breakfast Call, 6 :45 ; Prayers, First Call, 8 :30 ; Prayers, 8 :45 ; Recitation and Study hours, 9 :00 to 12 :00 ; Dinner Call, 12 :00.

AFTERNOON :—Roll Call, First Call, 1 :30 ; Roll Call, 1 :35 ; Recitation and Study hours, 1 :45 to 3 :45 ; Fatigue Call, 3 :45 ; Drill, First Call, 3 :55 ; Inspection of rooms by Adjutant ; Drill, 4 :00 to 5 :00 ; Recall, 5 :10 ; Recreation from Recall until Retreat ; Retreat at Sunset, except when sun sets before 7 :00, then at 7 :00 ; Call to Quarters 15 minutes after Retreat, except when Retreat is at sunset, then immediately after Retreat ; Study hours from Call to Quarters until Tattoo ; Tattoo 9 :30 in Spring and Fall, at 9 :00 in Winter ; Taps, 30 minutes after Tatoo. Taps are followed by an Inspection by the Ofcer of Day, who will see that Cadets are in Quarters, lights are out and fires are secured.

On Fridays Retreat is five minutes after Drill, and Permits will be granted to leave Quarters during early evening. Saturdays and Sundays there is no 1 :35 Roll Call nor Recitations.

Commissioned Officers

FOR 1887-8.

LUTHER BURNHAM JOHNSON, - - - - *Captain.*
FRED FARNHAM HAYWARD, - - - *First Lieutenant.*
FRED THAD. AUSTIN, - - - *Second Lieutenant.*
WILLIAM ALDEN SHAW, - - *Second Lieutenant.*

Senior Gold Medalist.

1888.

Captain LUTHER B. JOHNSON.

Honorable Mention.

1888.

HERMAN DRESSEL, JR.

Lieut.	WRIGHT SETH PRIOR	Underhill.
"	WILLIS ETHEL TERRILL	Underhill.
"	HERBERT NELSON CROSS	Gouldsville.
"	ROBERT LISTON IRISH	Brooklyn, N. Y.
"	FRED ELLSWORTH LAMB	Pittsfield.
"	AURIN RALPH SHAW	Northfield.
"	ELMER ROLAND JUCKETT	East Hubbardton.
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"	FRED HOWE CLARK	Northfield.
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"	CHARLES EDWIN COLLINS	Northfield.
"	SETH BURTON ADAMS	Alburgh.
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Lance Corp.	ALFRED FREDERICK BOOTH	Northfield.
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BUGLERS.

MUS. H. J. DANE.....MUS. C. F. PARKER.

Cadet Band.

D. W. Lewis.....Drum Major.
P. G. Smith.....Leader.

INSTRUMENTATION.

P. G. Smith.....Piccolo.
H. Dressel, Jr.....Solo E flat Cornet.
R. H. Child.....Solo 1st B flat Cornet.
H. J. Dane.....1st B flat Cornet.
C. E. Quinby.....2nd B flat Cornet.
C. F. Parker.....Solo E flat Alto.
E. L. Young.....1st E flat Alto.
C. G. Dole.....2nd E flat Alto.
E. A. Pond.....1st B flat Tenor.
G. L. Ballou.....2nd B flat Tenor.
W. H. Sprague.....Baritone.
A. R. Shaw.....Tuba.
F. A. Gokey.....Bass Drum.
J. R. Langdon.....Tenor Drum.

Calendar--1888-9.

FALL TERM, 1888.

September 13, Thursday :—Entrance Examinations and Registration.
December 17–20 :—Term Examinations.
December 20, Thursday :—Term ends.

WINTER TERM, 1889.

January 3, Thursday :—Entrance Examinations and Registration.
February 22, Friday :—Washington's Birthday.
March 18–21 :—Term Examinations.
March 21, Thursday :—Term ends.

SPRING TERM, 1889.

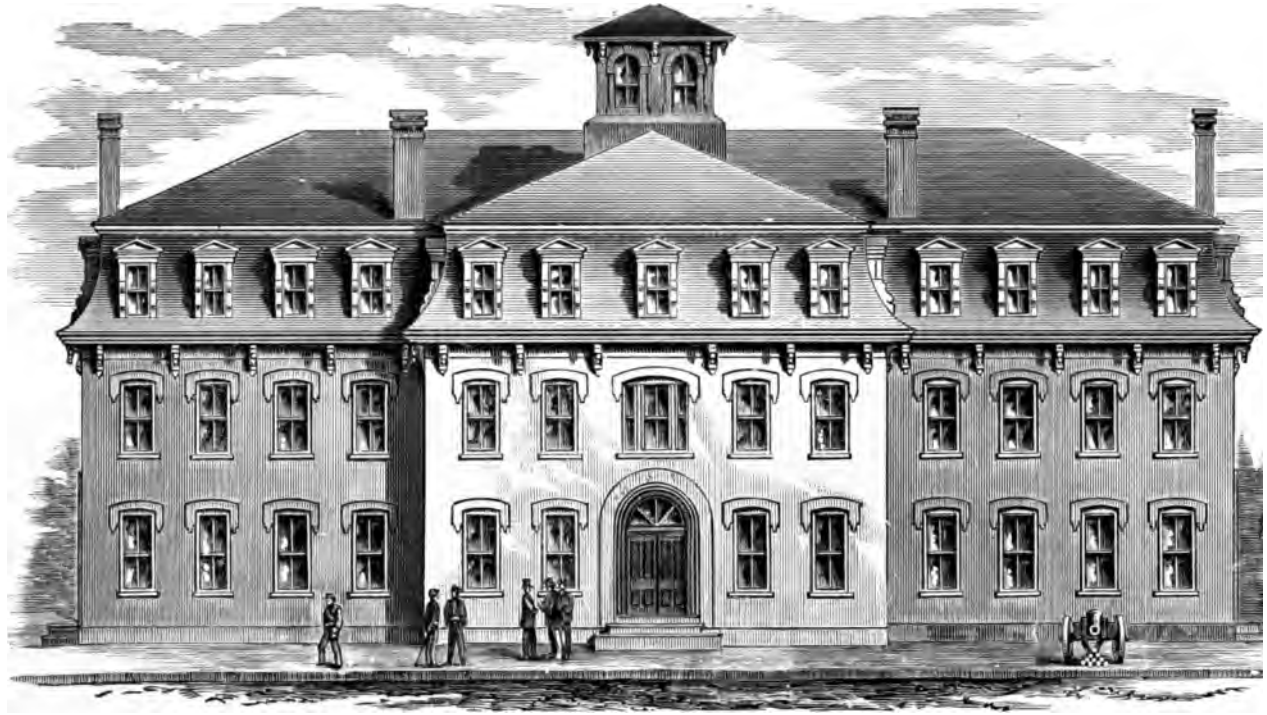
April 4, Thursday :—Entrance Examinations and Registration.
May 8, Wednesday :—Seniors will present graduation theses.
May 30, Thursday :—Memorial Day.
June 3, Monday :—Senior Examinations.
June 10–15 :—Final Examinations.
June 17 :—Annual Encampment begins.
June 25, Tuesday :—Sheldon Prize Speaking.
June 26, Wednesday :—Annual meeting of Trustees. Junior Exhibition.
June 27, Thursday :—Annual Commencement.
June 28, Friday :—Entrance Examinations.

FALL TERM, 1889.

September 19, Thursday :—Entrance Examinations and Registration.
December 16–19 :—Term Examinations.
December 19, Thursday :—Term ends.

WINTER TERM, 1890.

January 2, Thursday :—Entrance Examinations and Registration.
February 22, Saturday :—Washington's Birthday.
March 17–20 :—Term Examinations.



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1890.









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Fifty-Sixth Annual Catalogue

177

—OF—

NORWICH UNIVERSITY.

Military, Scientific and Classical.

NORTHFIELD, VERMONT.

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ARGUS AND PATRIOT BOOK AND JOB PRINTING HOUSE.
1890.

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GEORGE D. THOMAS,	" " " 1891,	Waltham, Mass.
B. F. SPAULDING,	" " " 1892,	Fargo, No. Dak.
JOHN R. MOORE,	" " " 1893,	Elizabeth, N. J.
CHARLES DOLE,	" " " 1894,	Northfield.

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CHARLES C. BRILL, A. M.,
Professor of Chemistry, Physics and Natural Sciences.

*
Professor of Greek and Latin.

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HOMER J. DANE,
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ALFRED F. BOOTH,
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SIGNAL SERVICE OBSERVER.

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REV. HOMER WHITE,
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ARMORER.

Requirements of Admission.

All candidates for admission to the college must be at least fifteen years of age, and must present satisfactory evidence of good moral character.

TO THE COURSES IN CIVIL ENGINEERING, ARCHITECTURE CHEMISTRY, AND SCIENCE AND LITERATURE.

Candidates will be examined in the following studies:—

MATHEMATICS.—Arithmetic; Algebra to Quadratics; Plane Geometry.

ENGLISH LANGUAGE.—Grammar; Composition, with special attention to punctuation and the use of capitals.

GEOGRAPHY.—Physical and Political Geography.

HISTORY.—History of the United States.

TO THE COURSE IN ARTS.

In addition to the examinations in Mathematics, English Language, Geography and History laid down for the course in Science, examinations will be as follows:—

LATIN.—Cæsar's "Commentaries," four books, or Sallust's "Catiline"; Virgil's "Æneid," six books; Cicero, four orations.

GREEK.—Xenophon's "Anabasis," four books, or one hundred pages Goodwin's Greek Reader; Homer's "Iliad," two books.

Graduates from approved High Schools will be admitted upon certificates.

Candidates not fully prepared in all the requirements, will be conditioned for a limited time, or placed in a preparatory class.

ADVANCED STANDING.

Candidates for advanced standing will be examined in all the previous studies of the course; and if they come from another institution, will present certificates of honorable dismission.

Courses of Instruction.

COURSE IN MILITARY INSTRUCTION.

For all Students throughout the Four Years. Exercises, Drills or Lectures every day at 4 o'clock P. M.

FALL TERM.

Settings Up, Calls, Manual of Arms, School of the Company and Skirmish Drill; Bayonet Exercises indoors in bad weather.

WINTER TERM.

Broadsword and Sabre Drill, Manual of the Sword and Fencing. Juniors and Seniors, Lectures on Military Engineering or Military Science and Art of War.

SPRING TERM.

Artillery Drill and School of the Battery, Battalion Drill, Ceremonies and Dress Parade, Review of all Drills, Signaling, Lectures on Customs of the Service, Camping and Modern Warfare, Rifle Practice.

The lectures in Military Science and Modern Warfare embody ancient warfare and tactics, field fortification, field engineering, military tactics, artillery duty, principles of gunnery; the attack and defence of fortified places, operations of the siege; attack and defence of a province, and principles of base line of operations, torpedo service and other modern means of warfare. These lectures will be illustrated by maps and charts of modern sieges and battles. The lectures in Military Science alternate every other year with those in Modern Warfare, which requires the Junior and Senior classes to attend them.

Military discipline is exercised throughout, and the strictest observance of military customs required of Cadets.

Cadets assume the duties of Adjutant, Officer of Day, Guard, etc., in their turn, and are instructed to make out correctly the different descriptions of military reports; and, in short, all the duties incident to the field or garrison.

Military exercises and duties are so arranged as not to occupy any of the time that would otherwise be devoted to study. They are attended to at those hours which are generally passed by students in idleness, or devoted to useless amusements; for which they are made a pleasant, healthful and profitable substitute. They develop those manly arts and a bearing that always characterizes a soldier, and afford excellent physical training.

Military training prepares a young man for emergencies everywhere met; securing not only to himself but to his country, protection against mobs, riots, strikes and insurrections of every-day occurence, and which can be met in no other way.

These facts bring strongly to mind the advantage and necessity of a military education.

Examinations will be held in tactics, orders, duties and customs of Military Service, to insure familiarity and their prompt execution.

Courses of Study.

Five regular courses have been established, as follows:—

I. A course in Civil Engineering.
II. A course in Architecture.
III. A course in Chemistry.
IV. A course in Science and Literature.
V. A course in Arts.

The first three of these have a distinctly practical bearing, and give a thorough training for most of the scientific professions.

The course in Science and Literature is established for such as may not wish to pursue a full course in Mathematics, nor one for a distinctly scientific profession, and is designed to furnish a liberal preparation for business pursuits.

Each of these courses extends through four years, and is intended to give to the students a liberal culture.

Changes are made in the course in Chemistry to meet the wants of students preparing for Medicine and Pharmacy.

Courses in Science.

FRESHMAN YEAR.

FOR ALL COURSES EXCEPT IN ARTS.

NOTE.—The figures after each subject indicate the number of recitations per week, or its equivalent.

NOTE.—Two hours' work in laboratory, field, and drafting room are equivalent to one hour in recitation.

FALL TERM.—Algebra, 5; *French or German or Latin, 5; Inorganic Chemistry, 3; Rhetoric, 2; Free Hand Drawing, 5.

WINTER TERM.—Geometry, 5; French or German or Latin, 5; Inorganic Chemistry, 3; Rhetoric, 2; Perspective, 3; Lettering, 2.

SPRING TERM.—Trigonometry, 5; French or German or Latin, 5; Inorganic Chemistry, 3; Rhetoric, 2; Geometrical Drafting, 3; Projection, 2.

I. THE COURSE IN CIVIL ENGINEERING.

Leading to the Degree of Civil Engineer.

SOPHOMORE YEAR.

FALL TERM.—Analytical Geometry, 5; French or German, 3; Mechanics and Heat, 5; Descriptive Geometry (text), 3; Descriptive Drafting, 2; Pen Topography, 2.

*Subject to approval of Faculty throughout all courses.

WINTER TERM.—Differential Calculus, 5; French or German, 3; Electricity and Magnetism, 5; Descriptive Geometry, 3; Descriptive Drafting, 2; Tinting and Shading, 2.

SPRING TERM.—Integral Calculus, 5; Land Surveying, Leveling and Field Work, 5; French or German, 3; Acoustics and Optics, 5; Colored Topography, 2.

JUNIOR YEAR.

FALL TERM.—Mechanics of Engineering, 5; Geology, 5; Shades and Shadows, 2; Detail Drawing, Tracings and Blue Prints, 3; Railroad Surveying, 6 (text, 2; field work, 4).

WINTER TERM.—Mechanics of Engineering, 5; Mineralogy, 3; Blow-pipe Analysis, 2; Wet Analysis, 5; Graphics of Trusses and Arches, 5 (text, 2; drafting, 3).

SPRING TERM.—Bridge Stresses, 5; Botany, 3; Political Economy, 5; Architectural Drafting, 3; Stereotomy and Stone Cutting, 2; Meteorology, 2.

SENIOR YEAR.

FALL TERM.—Hydraulics, 5; Commercial Law, 5; Metallurgy, 2; Bridge Designing, 5; Economic Railway Location, 3.

WINTER TERM.—Electrical Engineering, lights, dynamos, alarms, house wiring, etc., 5; International Law, 5; Hydraulic and Sanitary Engineering, 5; Civil Engineering, 3.

SPRING TERM.—Spherical Astronomy, determination of time, latitude, etc., 5; Contracts, Specifications, etc., 2; Civil Engineering and Engineering Projects, 5; Preparation of Thesis, 5.

II. COURSE IN ARCHITECTURE.

Leading to the Degree of Bachelor of Science in Architecture.

The Freshman and Sophomore years of this course are identical with the first two years of the course in Civil Engineering.

JUNIOR YEAR.

FALL TERM.—Mechanics of Engineering, 5; Detail of Building, 5; Blue Prints and Tracings, 2; Shades and Shadows, 2; Geology, 5.

WINTER TERM.—Mechanics of Engineering, 5; Graphics of Roof Trusses and Arches, 5 (text, 2; drafting, 3); Mineralogy, 3; Blow-pipe Analysis, 2; Wet Analysis, 5.

SPRING TERM.—Architectural Drafting, 5; Stereotomy and Stone Cutting, 5; Political Economy, 5; Lectures on Egyptian, Grecian and Roman Architecture, 5.

SENIOR YEAR.

FALL TERM.—Hydraulics, 5; Designing, 5; Architectural Decorations, 3; Commercial Law, 5; Metallurgy, 2.

WINTER TERM.—Electrical Engineering, lights, dynamos, alarms, house wiring, etc., 5; Construction, 3; Hydraulic and Sanitary Engineering, 5; International Law, 5; Ventilation and Warming, 2.

SPRING TERM.—Modern Architecture and designing, 10; Contracts, Specifications, etc., 2; Preparation of Thesis, 5.

III. COURSE IN CHEMISTRY.

Leading to the Degree of Bachelor of Science in Chemistry.

SOPHOMORE YEAR.

FALL TERM.—Chemical Technics, 5; French or German or Latin, 3; Mechanics and Heat, 5; Qualitative Analysis, 5.

WINTER TERM.—Qualitative Analysis, 5; French or German or Latin, 3; Electricity and Magnetism, 5; Blow-pipe Analysis, 5.

SPRING TERM.—Botany, 3; French or German or Latin, 3; Acoustics and Optics, 5; Qualitative Analysis, 5; Land Surveying, 5.

JUNIOR YEAR.

FALL TERM.—General History, 5; Geology, 5; Organic Chemistry, 2; Qualitative Analysis of rare Minerals, 7.

WINTER TERM.—Logic, 5; Zoology, 3; Mineralogy, 3; Organic Chemistry, 2; Quantitative Analysis, 7.

SPRING TERM.—English Literature, 5; Industrial Chemistry, 5; Organic Chemistry, 2; Quantitative Analysis, 7.

SENIOR YEAR.

FALL TERM.—Commercial Law, 5; Agricultural Chemistry, 5; Metallurgy, 2; Toxicology, 5; Medical Chemistry, 5.

WINTER TERM.—International Law, 5; Assaying, 2; Water Analysis, 5; Commercial Chemistry, 7.

SPRING TERM.—Political Economy, 5; Gas Analysis, 5; Thesis, 5.

IV. COURSE IN SCIENCE AND LITERATURE.

Leading to the Degree of Bachelor of Literature.

SOPHOMORE YEAR.

FALL TERM.—History of England, 5; French or German or Latin, 3; Mechanics and Heat, 5; Themes, 2; Pen Topography, 2.

WINTER TERM.—Themes, 3; French or German or Latin, 3; Electricity and Magnetism, 5; Analytical Chemistry, 5.

SPRING TERM.—French or German or Latin, 3; Acoustics and Optics, 5; Analytical Chemistry, 5; Botany, 3.

JUNIOR YEAR.

FALL TERM.—French or German or Latin, 5; Geology, 5; General History, 5.

WINTER TERM.—French or German or Latin, 5; Mineralogy, 3; Blow-pipe Analysis 2; Logic, 5; Zoology, 3.

SPRING TERM.—French or German or Latin, 5; Astronomy, 5; English Literature, 5; Land Surveying, 5.

SENIOR YEAR.

FALL TERM.—French or German or Latin, 3; American History, 5; Commercial Law, 5; Metallurgy, 2.

WINTER TERM.—French or German or Latin, 3; Mental and Moral Philosophy, 3; International Law, 5; Elements of Criticism, 5.

SPRING TERM.—French or German or Latin, 3; Political Economy, 5; Contracts and Specifications, 2; Thesis, 5.

V. COURSE IN ARTS.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

FALL TERM.—Algebra, 5; Memorabilia and Greek Prose, 5; Livy and Latin Prose, 5; Rhetoric, 2; Free Hand Drawing, 5.

WINTER TERM.—Geometry, 5; Herodotus, 5; Cicero Tusculan Disputations and Roman History, 5; Rhetoric, 2; Perspective, 3; Lettering, 2.

SPRING TERM.—Trigonometry, 3; Homer's Odyssey and Grecian History, 5; Horace's Odes, 5; Rhetoric, 2; Geometrical Drafting, 3; Projection, 2.

SOPHOMORE YEAR.

FALL TERM.—Sophocles, 5; Juvenal's Satires, 5; Mechanics and Heat, 5; Pen Topography, 2.

WINTER TERM.—Euripides, 5; Tacitus, 5; Electricity and Magnetism, 5.

SPRING TERM.—Æschylus, 5; Tacitus, 5; Acoustics and Optics, 5; Botany, 3.

JUNIOR YEAR.

FALL TERM.—Demosthenes, 2; Pliny, 3; Geology, 5; French or German, 5; Inorganic Chemistry, 3.

WINTER TERM.—Plato, 2; Plautus, 3; Logic, 5; Inorganic Chemistry, 3; French or German, 5.

SPRING TERM.—Greek Syntax, 2; Latin Syntax, 3; French or German, 5; Inorganic Chemistry, 3; Astronomy, 5.

SENIOR YEAR.

FALL TERM.—Land Surveying, 5; Analytical Chemistry, 5; French or German, 3; Commercial Law, 5.

WINTER TERM.—Mineralogy, 3; Blow-pipe Analysis, 2; French or German, 3; International Law, 5; Elements of Criticism, 5; Mental and Moral Philosophy, 3.

SPRING TERM.—Zoology, 3; French or German, 3; Political Economy, 5; Thesis, 5.

Composition and Oratory will be pursued in all courses throughout the four years. Original orations are required during the Senior year.

Military instructions throughout all courses the same as laid down in the Military Course (page 6).

Text-Books.

MATHEMATICS.—Astronomy, Young. Algebra, Wentworth's Complete. Analytical Geometry, Loomis. Calculus, Taylor. Geometry, Davies' Legendre. Mechanics, Church. Trigonometry, Davies. Descriptive Geometry, Faunce.

SCIENCES.—Botany, Gray's School and Field Book. Chemistry, Analytical Qualitative, Fresenius. Volumetric Analysis, Sutton. Analytical Quantitative, Fresenius. Blow-pipe, Nason's Elderhorst. Inorganic, Shepard, Organic, Remsen. Physics, Gage's Elementary, with lectures on special subjects. Zoology, Packard. Geology, Winchell's Geological Studies. Mineralogy, Dana's Manual and Foye's Tables.

LANGUAGES.—French, Fasquelle's Complete Course, Knapp's French Readings and Various French Works. German, Otis' Elementary German Course, Whitney's German Grammar and Reader, Hodges' Scientific German, German Literature. Greek, Goodwin's Grammar. Latin, Harkness', and Allen and Greenough's Grammar.

HISTORY.—General History, Webber; Grecian, Smith; Roman, Smith; American History, Lectures.

RHETORIC.—Clark. Political Economy, Perry. International Law, Woolsey. Commercial Law, Townsend. Logic, Jevons. Moral Philosophy, Janet. English Literature, Welch.

ENGINEERING.—Land Surveying, Carhart. R. R. Surveying, Searles. Bridge Stresses, Greene. Civil Engineering, Mahan and Trautwine. Specifications, Haupt. Hydraulic Engineering, Fanning. Sanitary Engineering, Latham, Philbrick.

Degrees.

The time required for any full course leading to a Degree is four years. Students may enter in advance by passing satisfactory examinations in the studies already gone over by the class they propose to enter, and those required for admission.

Students are allowed to advance as rapidly as they are able, subject to the direction of the Faculty.

The candidate for any degree must deposit with the Faculty a satisfactory thesis on some scientific or literary subject connected with his department.

DEGREES ON GRADUATION.

The Degree of Civil Engineer is conferred upon any student who has completed the course in Civil Engineering, and has passed the required examinations.

The Degree of Bachelor of Science is conferred upon any student who has satisfactorily completed the course in Architecture.

The Degree of Bachelor of Science is conferred upon any student who has completed the course in Chemistry.

The Degree of Bachelor of Literature is conferred upon any student who has satisfactorily completed the course in Science and Literature.

The Degree of Bachelor of Arts is conferred upon any student who has satisfactorily completed the course in Arts.

ADVANCED DEGREES.

The Master's Degree in Science or Arts is conferred upon graduates of this University of three years' standing who have taken the corresponding Bachelor's Degree, and who, during that time, shall have been engaged in professional, literary or scientific pursuits, or have pursued a course marked out by the Faculty, for two years after graduation, and passed the examinations.

The Degree of Master of Civil Engineering may be conferred upon graduates in Civil Engineering of three years' standing, who have pursued the profession of engineering during the time, have passed the requisite examinations, and have presented a satisfactory thesis, or upon graduates who satisfactorily complete an additional course.

Subjects and Methods of Instruction.

ENGINEERING.

The work of the first year in this department is common to all courses. The thorough training of the eye and hand in Freehand Drawing is of the greatest importance in all subsequent drafting. The course embraces accurate outline drawing, elementary perspective, sketching, object drawing, pencil shading and designing. The effort is made to produce designers, instead of mere copyists. Practice in lettering, large and small drawings, general orders, etc., is given in the second term. Neatness of text and rapidity of execution are aimed at. In the third term, dexterity in handling drafting instruments is acquired. Various applications of geometry to drafting, and

the orthographic and isometric projections of joints and splices in wood construction are taught. Descriptive Geometry is taught with special reference to its applications to shades and shadows, machine construction, stone cutting, and to the design of stone bridges, culverts, spiral stairways, sewer intersections, etc.

The course in Bridges begins with tinting and shading of details, which are measured by students in visiting engineering structures, and then drawn to scale. Thus, while the student becomes familiar with the use of brush and colors, he also accustoms his eye to the true dimensions of the various joints. A course of lectures on designing bridge details is given in connection with Graphics, a more extended course in Bridge Stresses is given in the ninth term, and in the tenth term the student is given specifications and required to apply his theoretical knowledge in designing railway and highway bridges of wood, iron and steel, even to the minutest details. In Pen Topography and Colored Topography the students use the conventions for map making, and apply them in the maps platted from the "land" and "railroad surveys."

An extended course in Applied Mathematics, or Mechanics of Engineering is given, in which all engineering problems concerning rigid bodies at rest or in motion, the strength of engineering materials, and the statics and dynamics of liquids and gases, are practically treated. Under Hydraulic, Sanitary and Civil Engineering, the design and construction of water supply and distribution systems, sewerage systems and sewage disposal, and of canals, tunnels, foundations in water and on land, and river and harbor improvements, are treated. In the N. U. Reading Room are placed the best of engineering periodicals, which give descriptions of all new works of special interest, and enable the student to keep up with the most recent methods of construction.

In Land Surveying and Leveling, practice in using and adjusting instruments is given, and the most approved methods

of map making, dividing up and parting off land, and supplying omissions in old surveys are taught. In Railroad Surveying, field work in preliminary surveying, final location, slope staking, etc., is done. Office work is done in making contour maps of the line, profiles, earthwork calculations, estimates of cost, etc. The lectures on Economic Railway Location enable the students to decide between two or more railway lines which have previously been located, and how to reduce expenditures in the operation of lines already built.

EQUIPMENT.—The department has a large collection of designs for Freehand and Perspective Drawing, and of modern houses, cottages, public buildings and architectural details. It has also fine collections of blue prints of the best and most notable bridges recently erected, including pivot draws, plate girders and various types of pin-connected and riveted trusses, and blue prints of sewer details and sewer constructions. It has a large number of models of wooden splices and joints used in bridge construction and carpentry, and of details of machine construction.

The department has procured the best modern instruments for angle and line measurement, levels, rods, chains, etc., and is prepared to give as much of practical engineering field work as can be given in schools, with the first-class instruments now used in modern engineering.

ARCHITECTURE.

The work in the Architectural Course is very similar to that of the Civil Engineering Course. The instruction given is planned so as to make the Architect independent of the Engineer in staking out work and designing house drainage and ventilation. Work in the same subject in the Civil Engineering Course is taught with special reference to the needs of the Architectural student. Considerable time is given to the design of modern buildings, and the student encouraged to put all his extra time in this line of work.

MATHEMATICS.

In the department of Mathematics sufficient attention is paid to practical applications to enable students to see the utility of their studies and to assist them in the scientific professions.

Theory is also developed in as careful and complete a manner as possible, in order that the student may receive that mind discipline which is so invaluable an equipment for all pursuits, whether technical or general.

The clearest and most concise text-books are sought for; abstruse and unprofitable discussions are avoided; original work is encouraged, and students are called on for personal recitations more frequently than in most institutions of similar character.

GEOLOGY AND MINERALOGY.

The treatment of Geology consists of work in text-book, with recitations, supplemented by frequent excursions in the field, in which the many interesting features in which the region is rich are examined. Maps representing the geological formations of counties or larger sections, are required in colors. Mineralogy is taken up by recitations upon descriptions of minerals, the student being required to identify minerals by their physical properties. In connection with this work, each student is required to make a collection of fifty minerals, which he will determine and classify. To aid him in this work he is given instruction in Blow-pipe Analysis and Determinative Mineralogy.

MODERN LANGUAGES.

The work in Modern Languages is such as to insure the students' having a thorough knowledge of the groundwork and grammar of the languages, after which studies in the literature of the languages are taken up. Stress is laid upon the necessity of composition, and written exercises are required from students. Conversational practice is also given to develop pronunciation and familiarity with idioms.

PHYSICS.

The treatment of Physics consists of text-book work, with frequent experiments. The work in Mechanics is still further treated under a separate head. Especial attention is given to Electricity and Magnetism, and the student is required to do actual work in wiring, etc., making computations of resistance in telegraph and electric light wires. He is also taught the principles of various electrical machines, and is encouraged to make models. The class is also taken to visit electric plants, where the principles taught in the class room are practically applied.

CLASSICS.

It is the aim of the Classical Department to make the work as thorough as possible, and to drill the students particularly in parsing and construction. In this manner not only a thorough knowledge of the language is obtained, but the greatest amount of mental discipline possible is derived. The similarity and connection between the Latin and Greek on the one hand, and the English on the other, are shown and commented upon by the professor. The Greek and Latin roots from which our English words are derived, are pointed out. Care is taken that the student translate into good English, that he may thus improve his knowledge of English in the study of the Classics.

CHEMISTRY.

The study of Chemistry is begun by students in all courses, except that of Arts, in the Freshman year. It consists during this year of lectures upon general Inorganic Chemistry, in which the principles of the science are brought out and fully explained. Following this is a description of the properties of elements and compounds and methods used for preparing them. To bring this work more clearly before the student a large number of experiments are performed before the class, in many of which the students are permitted to assist, thereby

gaining a much better idea of the subject than would be possible by any other method of instruction. The second year's work is intended for those who take the Chemical Course, and consists of daily laboratory practice, together with recitations and lectures upon Chemical Technics. The work of this and of the following years is performed by the students themselves, under the direction of the professor and his assistant. Qualitative examinations of minerals, commercial products, fertilizers, drugs and medicines, are made, and as the student becomes more advanced, Quantitative examinations of the same substances are made. For those students desiring to fit themselves for the study of Medicine and Pharmacy, special instruction is provided in the Chemical Laboratory.

FINALLY.

It is the aim in all of the departments of the University to teach students the practical application of what they learn. Mere theories are of little value unless the student can apply them successfully. Too many college graduates have failed in their professions from being unable to apply theory to practice, and it is this lack which we endeavor to supply in our students.

Brief Sketch of Norwich University.

This institution was founded in 1819, by Capt. Alden Partridge, of whom a cut appears on the cover of this Catalogue, and was known as the American Literary, Scientific and Military Academy. It retained the name until November 6, 1834, when a charter of incorporation was granted it by the State of Vermont under the name of Norwich University.

Thus was founded the FIRST Scientific, Classical and Military College in the Union. This new departure met with universal favor, and its halls were soon crowded with young men from every State in the Union.

In March, 1866, the University buildings at Norwich were destroyed by fire, and the University was removed to Northfield, Vt., where the citizens offered fine grounds and commodious barracks. Here the same system of instruction and military discipline is maintained, and many young men have been enabled to go forth to fill high positions in various professions.

This was the first institution in the country to lay down a purely scientific course of study, and up to the time of the Rebellion the only one which embraced in its curriculum thorough Military, Classical and Scientific courses. By her work for half a century, Norwich University merits the general confidence of the public. Special attention having been given to Military Science and Engineering, her graduates have become particularly distinguished as army officers and civil engineers, some having risen to the foremost ranks of military commanders.

The Roster of Alumni and Past Cadets contains more than fifteen hundred names, and the Institution is to-day in a most prosperous condition.

Scholarships.

The State Legislature has provided for thirty free scholarships, according to the following act from the laws of 1884 :—

AN ACT RELATING TO THE APPOINTMENT OF CADETS TO NORWICH UNIVERSITY.

Sec. 1. There shall be admitted, free of charge for tuition and room rent, to the Norwich University, at Northfield, as many students from each county in the State, as there are Senators from such county in the general assembly, who shall be instructed in all departments of learning taught in said University, and be subject to all the rules and regulations of said school.

Sec. 2. The Senators in each county shall designate and appoint the cadet or cadets from such county to the said University, and, when-

ever a vacancy occurs from such county for any cause, fill the same; said appointments to be made by competitive examinations, in the month of June in each year, and whenever a vacancy shall exist.

Sec. 3. Whenever the Senators from any county shall fail to fill any vacancy from such county for one month after being notified of the same by the Trustees of said University, the trustees may fill she same by appointing from the county if there are any applicants who pass the examination required by the rules of said University, and if not, then from any county in the State.

Sec. 4. The Auditor of Accounts shall draw his order on the Treasurer of the State, payable to the Trustees of said University or the Treasurer thereof, for the sum of fifty dollars for each cadet so attending said University, appointed as above, which shall be in full payment for tuition and room rent for such cadets, said tuitions to be payable in comformity with the rules of said University now existing as to the payment of tuitions, on the sworn statement of account of the President or Vice-President of said University, and to be paid by the first day of June in each year.

Sec. 5. This act shall take effect from its passage.

Approved November 25, 1884.

In addition to the above there have been created twelve half-scholarships by benevolent friends of the University.

Young men desiring to take advantage of these cadetships hereby offered, should address the SUPERINTENDENT, at Northfield.

General Information.

EXPENSES.

A prominent feature of the University is the very reasonable charges for instruction and the low expense of living. The charge is placed at $65 per year, which includes instruction, room rent and incidentals. Students obtain board at from $2.50 to $3 per week, which makes the whole expense cheaper than the living expenses alone in cities, and at other institutions of learning.

The following table gives a statement of the expenses:—

Tuition per College Year,	$45.00
Room-rent,	15.00
Library and Contingent Expenses,	5.00

The charge for room rent is based upon the supposition that two students occupy the same room. Cadets furnish their own rooms.

Injury to the property of the college will be repaired at the expense of the cadet causing it; but the damage will be equally assessed upon all members of the corps if the perpetrator be unknown. Every cadet will be held responsible for any injury done in his own room.

Cadets who are appointed musicians will have their tuitions remitted.

Bills are payable strictly in advance.

Students in the course in Chemistry are required to deposit $10 at the beginning of each term of the Sophomore year, and $15 at the beginning of each term of the Junior and Senior years, the amount not consumed being returned at the end of each term. In the other courses a fee of $5 per term is charged for Qualitative Analysis and $3 per term for Blow-pipe Analysis. These charges are for chemicals, and do not include breakages or waste of materials. The average expense to students in the Chemical course, for materials, is from $6 to$8 per term.

The Central Vermont railroad allows half-fare.

The Passumpsic railroad allows free return checks to students paying full fare in coming to attend the University.

For further information address either the ACTING PRESIDENT, or CHARLES C. BRILL, Superintendent, at Northfield, Vt.

BUREAU OF INFORMATION.

There has recently been established by the University, a Bureau of Information. It is intended that this Bureau shall serve in assisting graduates in obtaining desirable positions as Teachers, Engineers, Architects and Chemists. Those of

the Alumni who desire such positions should send their addresses to the Superintendent, that they may receive the benefit of the numerous applications for men, of which the University is constantly in receipt. The value of this feature since its establishment is attested by the comparatively large number of graduates who have found lucrative positions, without trouble or expense.

RHETORICALS.

Friday afternoon of each week is devoted by the entire corps of cadets to rhetorical exercises, in which each cadet is required to take part, coming on every third week. The exercises are varied, consisting of declamation, essays, general and technical orations, debates, book reviews, presentations and acceptance speeches. Much stress is laid upon the subject of extemporaneous speaking. Each cadet is required to rehearse before a member of the Faculty before appearing publicly. At the close of each rhetorical session the members of the Faculty make criticisms and suggestions upon the work done. In place of the regular rhetorical work, the corps from time to time organizes itself into a senate or other deliberative body, thus gaining a familiarity with parliamentary law. Such drill cannot fail to materially assist graduates in taking prominent public positions.

THE REVEILLE.

The cadets edit and conduct a monthly magazine devoted to the interests of the University, the Alumni and the Corps itself. Upon this paper excellent drill in journalism is afforded the cadets.

READING ROOM.

A reading room is maintained by the cadets, which is provided with the leading literary, political and technical periodicals of the day.

STUDENTS' SOCIETIES.

Two literary societies exist among the students, in which

valuable work is done, and at the same time social improvement cultivated. These societies are in every way approved by the authorities.

STUDENTS ENTERING

should report upon arrival to the Superintendent, who will give them all necessary instructions as to examinations, etc. The Superintendent will also assign each new student to some member of the Faculty, who shall act as his

ADVISER

in all matters pertaining to University duties, and to whom the student may go at any time for advice.

SPRING ENCAMPMENT.

At the close of the spring term, and during the week immediately preceding that of Commencement, the entire corps will go into camp upon the parade ground, and will there receive instruction in all the details of camp life, together with guard duty. While in camp a general review of all the drills will be made, to insure familiarity with them. During this encampment considerable time will be devoted to

RIFLE PRACTICE,

in which contests will be held and prizes awarded.

RELIGIOUS FEATURES.

Prayers are held before the opening of academic exercises on each week-day morning. Upon Sunday morning each cadet is required to attend divine service with some one of the village congregations, the choice being made at the beginning of the term by the cadet himself if of age, or, otherwise, by his parents or guardians, and adhered to throughout the term. The societies of the village are: Congregationalist, Episcopal, Methodist, Roman Catholic, and Universalist. While cadets are held to a strict observance of the rules for religious exer-

cises, and while all immoralities are carefully guarded against, yet the institution is in every respect non-sectarian.

Y. M. C. A.

There has recently been established by the students a branch of the Intercollegiate Young Men's Christian Association, which is an organization of students and professors for the promotion of their religious culture and for Christian work in the University.

CADET BAND.

The cadets support a Cornet Band of fifteen pieces, which is a very pleasant and important feature of the institution, being essential to parades and marches, and at the same time furnishing a pleasant and profitable diversion for the cadets themselves.

PRIZE SPEAKING.

Through the generosity of Mr. N. Louis Sheldon, class of '84, two prizes of *Fifteen* and *Ten Dollars*, are offered to those members of the Sophomore and Freshman classes who shall show the greatest merit in declamation in a contest held during Commencement week.

HONORABLE MENTION.

The student having the highest general average in his class for the year, shall, providing such average be at least 90 per cent., receive honorable mention at the annual Commencement, and the honor list shall be printed in the annual Catalogue.

SENIOR MEDALIST.

The member of the Senior class who shall graduate with the highest general study average, shall receive the Faculty Gold Medal.

COMMISSIONED OFFICERS.

Upon graduation, cadet officers receive commissions signed by the President of the University and by the Adjutant and Inspector-General of the State.

CONDITIONS.

No student deficient in fifteen or more hours' work, at the end of any year, shall not be allowed to enter the next class until such work is made up, and no condition will be allowed to stand longer than one year. Any deficiency shall debar a student from entering the last term of the Senior year.

PREPARATORY DEPARTMENT.

Experience having taught us that students can be better prepared for the University under the immediate direction of the Faculty, we have established a Preparatory Department, to which students will be admitted at any time during the year.

ENDOWMENT.

The plan for increased endowment, which has been presented to the friends of the University, has met with a hearty reception, and quite an amount has already been subscribed. With the rapid growth of the institution and the large increase in the number of students, new and greater demands are made upon her. To meet these demands a larger endowment will be necessary, and it is earnestly hoped that the Alumni and friends of Norwich University will do their part toward assisting the institution.

MILITARY FEATURE.

Throughout the history of the University there has been maintained a very high standard of Military excellence. From the first it has held the distinction of being the foremost Military institution in the land with the exception of the National Academy. The following from Gen. W. T. Sherman's speech before Ransom Post, St. Louis, Mo., will sustain the above statement regarding this University. In speaking of General T. B. Ransom, he says: "He became Principal of Norwich University, THEN, as SINCE, an Academy of great renown. This military school at one time almost rivaled the National Academy of West Point, and there many a man who after-

ward became famous in the Mexican and Civil wars, first drank in the inspirations of patriotism and learned the lessons of the art of war." The reputation of the New England regiments must be attributed to discipline and instruction received at this institution, as much as to any other single factor; and the "Green Mountain Boys" owe their national reputation and success largely to their training within her halls. Her Honor Roll in the late Civil war contains the names of twelve Generals (among them Gens. Dodge, Buel, Seymour, Wright, Ransom); twenty-five Colonels, forty field officers, fifty-five Captains, one hundred and forty-three Lieutenants, and a long list of non-commissioned officers. It has been the highest endeavor of the Trustees and Faculty to maintain in every respect the Military reputation of the University. Attention to the course of Military Instruction (page 6) will give a fair idea of the training given, and a copy of the Rules and Regulations will give a complete idea of the duties required of Cadets.

STANDING, MILITARY CUSTOMS, ETC.

Academic standing depends upon recitations; Military standing upon marks of merit and demerit, together with proficiency in military duties. Immoralities, technical and minor offences, are marked with demerits, and are punishable in other ways. Wherever purely academic duties require variation in special matters, the analogies of Military usage are maintained, so far as practicable. The students are called cadets, and are under Military discipline. The cadet officers are appointed on the basis of Military and academic standing. Every cadet is required to wear the Uniform of the University, when on duty.

UNIFORMS.

A single-breasted dress-coat of dark blue cloth, University buttons; trousers dark blue, with light blue stripe; black cravat; U. S. regulation helmet, with usual gilt ornament; forage cap; boots, or high shoes of black, unglazed leather. The

Commandant furnishes accurate directions for the tailor's use, if desired. The uniform can doubtless be made better and more cheaply at Northfield, than elsewhere. These uniforms are as durable as any wearing apparel, and are no more expensive than ordinary clothing such as becomes students. Sufficient time is given for students to wear out their citizen's suits, before they are required to procure uniforms.

LIBRARY AND COLLECTION.

The University library, while not containing as many volumes as those of many colleges, is nevertheless very well supplied with works of reference, and in addition contains many works of great value, which are not to be found in newer libraries. Our mineral collection is small, but is growing rapidly. Manufacturers, dealers in building materials, and others are requested to send specimens of their products to the Department of Engineering. Specimens in Natural History, Minerals, etc., will be gratefully received by the Secretary of the Faculty. Alumni, Past Cadets, Authors and Publishers are earnestly requested to contribute their publications to the University Library.

RECOGNITION BY STATE AND GENERAL GOVERNMENTS.

The fact that the State of Vermont has recognized Norwich University by making her Corps of Cadets a part of the State Militia and by granting her free scholarships, shows the extent to which the State government values the institution as a training school for the citizen soldier, and attests her gratitude for services already rendered. For like reasons the U. S. Government has detailed two of its active army officers for duty at the University, one as Professor of Military Science and the other as Signal Service Observer and Instructor in Military Signaling.

RESIDENT IN BARRACKS.

The Superintendent resides in the barracks with the cadets, thus insuring a strict observance of rules and regulations.

LOCATION.

Northfield being located on the main line of the Central Vermont railroad, is easy of access from all directions, and students are given half-fare rates upon application. Telegraphic communication can be had directly with the University building, through the Western Union Company. There is probably no State that can boast of a more healthful climate than Vermont. Northfield is in the central part of the State, and is ten miles from the Capital, Montpelier. A popular resort in summer, it loses none of its healthfulness in winter. The water is pure and clear, and the University and village are well supplied by private systems of pure spring water.

Daily Routine of Duty.

FORENOON.—Reveille, First Call, 6 :05 ; Reveille, 6 :15 · Inspection of rooms by Officer of Day, 6 :40 ; Breakfast Call, 6 :45 ; Prayers, First Call, 8 :30 ; Prayers, 8 :45 ; Recitation and Study hours, 9 :00 to 12 :00 ; Dinner Call, 12 :00.

AFTERNOON :—Roll Call, First Call, 1 :30 ; Roll Call, 1 :35 ; Recitation and Study hours, 1 :45 to 3 :45 ; Fatigue Call, 3 :45 ; Drill, First Call, 3 :55 ; Inspection of rooms by Adjutant ; Drill, 4 :00 to 5 :00 ; Recall, 5 :10 ; Recreation from Recall until Retreat ; Retreat at Sunset, except when sun sets before 7 :00, then at 7 :00 ; Call to Quarters 15 minutes after Retreat, except when Retreat is at sunset, then immediately after Retreat ; Study hours from Call to Quarters until Tattoo ; Tattoo 9 :30 in Spring and Fall, at 9 :00 in Winter ; Taps, 30 minutes after Tatoo. Taps are followed by an Inspection by the Ofcer of Day, who will see that Cadets are in Quarters, lights are out and fires are secured.

On Fridays Retreat is five minutes after Drill, and Permits will be granted to leave Quarters during early evening. Saturdays and Sundays there is no 1 :35 Roll Call nor Recitations.

Commissioned Officers

FOR 1888-9.

WRIGHT SETH PRIOR.....*Captain.*
HERBERT NELSON CROSS.....*First Lieutenant.*
AURIN RALPH SHAW.....*Second Lieutenant.*
ROBERT LISTON IRISH.....*Second Lieutenant.*
GEORGE HERBERT COBLEIGH.....*Second Lieutenant.*
WILLIS ETHEL TERRILL.....*Second Lieutenant.*
FRED ELLSWORTH LAMB.....*Second Lieutenant.*
FRED HOWE CLARK.....*Second Lieutenant.*
ELBRIDGE WHEELER GILMAN.....*Second Lieutenant.*
ELMER ROLAND JUCKETT.....*Second Lieutenant.*

Senior Gold Medalist.

1889.

Lieutenant, FRED E. LAMB.

Honorable Mention.

1889.

Lieutenant, FRED E. LAMB.

Corporal, ALFRED FREDERICK BOOTH.

Lieut.	Charles Fred Parker	Northfield.
"	Charles Edwin Collins	South Northfield.
"	Ira Rich Mower	Calais.
"	Seth Burton Adams	Alburgh.
"	Herman Dressel, Jr	Springfield.
"	John Huntoon Judkins	Charlestown, N. H.
"	Homer John Dane	Northfield.
"	Dexter W. Lewis	Boston, Mass.
Sergt.	Alfred Frederick Booth	Northfield.
"	George Franklin Abbott	Northfield.
"	William Hibbard Sprague	East Brookfield.
"	Edward Aiken Shuttleworth	Bellows Falls.
"	Harry Gordon Woodruff	Chelsea.
Corp.	Ethan Allen Shaw	South Northfield.
"	Carl Gilman Dole	Northfield.
"	Heber Calvin Cady	Northfield.
"	Burton Wiley Farnham	Northfield.
Private	George Leslie Andrews	Gouldsville.
"	Flynn Guernsey Austin	Northfield.
"	George Frederick Bailey	Hyde Park, Mass.
"	George Langdon Ballou	Bethel.
"	Edward Cushman Bennett	Bennington.
"	Charles Alonzo Cady	Warren.
"	Homer Royce Chadwick	Franklin.
"	Ephraim Wesson Clark	East Peacham.
"	Leo Bertrum Clogston	Fair Haven.
"	Joseph Spafford Craigue	Weathersfield.
"	Francis Arthur Eaton	Randolph.
"	Charles John Clement Evans	Northfield.

Private ROBERT HENRY FORD.....St. Albans.
" EBEN WATSON GAYNOR.....Gouldsville.
" MATTHEW IRVING GILDER.....St. Albans.
" BENJAMIN WHITNEY GLEASON.....Boston.
" FRANK ALBERT GOKEY.....Northfield.
" FRED MINER GOODHUE.....Lowell, Mass.
" GEORGE LOUIS HARWOOD.....Bennington.
" GEORGE GRISWOLD HENSDALE.....St. George.
" HARVEY LEVI HINMAN.....North Stratford, N. H.
" FRANK DUDLEY HOLBROOK.....Newport.
" WINTHROP TRUE JACKMAN.....East Corinth.
" FRANK ALDEN MANUEL.....North Troy.
" HIRAM NATHANIEL MATTISON...South Shaftsbury.
" ORREN LUTHER PEASE.....Hartford.
" CHARLES WARNER PIERCE.....Bennington.
" WARREN ALEX PIERCE.....Bennington.
" ERASMUS ARLINGTON POND.....Rutland.
" RUSSELL WILLIAMS PORTER.....Springfield.
" ARTHUR SEYMOUR POTTER....Sturgis, South Dak.
" CHARLES EDWIN QUINBY.....Gouldsville.
" CLARENCE BONNETT RIGGS.....Middlebury.
" JOHN RUSHLOW.....Burlington.
" EDMUND HENRY RYAN.....Gouldsville.
" PERCY GATES SMITH.....Wells River.
" ARTHUR CURTIS TABER.....Vergennes.
" WILLIAM KIMBALL TAFT.....Essex Junction.
" GEORGE ARMOR TRACY.....Chelsea.
" DEWITT CLINTON WEBB.....Granville.
" GEORGE DUFF WHITESIDE.....Vergennes.

BUGLERS.

MUS. H. J. DANE.....MUS. C. F. PARKER.

Cadet Band.

G. F. Bailey.....Drum Major.
P. G. Smith.....Leader.

INSTRUMENTATION.

P. G. Smith.....Piccolo.
H. Dressel, Jr.....Solo Eb Cornet.
A. S. Potter.....Solo Bb Cornet.
G. D. Whiteside.....1st Bb Cornet.
R. W. Porter.....2nd Bb Cornet.
F. D. Holbrook.....3rd Bb Cornet.
C. F. Parker.....Solo Eb Alto.
C. G. Dole.....1st Eb Alto.
E. W. Gaynor.....2nd Eb Alto.
G. L. Ballou.....1st Bb Tenor.
E. C. Bennett.....2nd Bb Tenor.
H. J. Dane.....Baritone.
O. L. Pease.....Bb Bass.
W. H. Sprague.....Tuba.
F. A. Gokey.....Bass Drum.
G. L. Harwood.....Tenor Drum.

Calendar--1889-90-1.

FALL TERM, 1889.

September 19, Thursday :—Entrance Examinations and Registration.

December 16–19 :—Term Examinations.

December 19, Thursday :—Term ends.

WINTER TERM, 1890.

January 2, Thursday :—Entrance Examinations and Registration.

February 22, Saturday :—Washington's Birthday.

March 17–20 :—Term Examinations.

March 20, Thursday :—Term ends.

SPRING TERM, 1890.

April 3, Thursday :—Entrance Examinations and Registration.

May 7, Wednesday :—Seniors will present graduation theses.

May 30, Friday :—Memorial Day.

June 2, Monday :—Senior Examinations.

June 9–11 :—Final Examinations.

June 16 :—Annual Encampment begins.

June 24, Tuesday :—Sheldon Prize Speaking.

June 25, Wednesday :—Annual meeting of Trustees. Junior Exhibition.

June 26, Thursday :—Annual Commencement.

June 27, Friday :—Entrance Examinations.

FALL TERM, 1890.

September 18, Thursday :—Entrance Examinations and Reg-

WINTER TERM, 1891.

January 2, Friday :—Entrance Examinations and Registration.
February 22, Sunday :—Washington's Birthday.
March 16–19 :—Term Examinations.
March 19, Thursday :—Term ends.

SPRING TERM, 1891.

April 2, Thursday :—Entrance Examinations and Registration.
May 6, Wednesday :—Seniors will present graduation theses.
May 30, Saturday :—Memorial Day.
June 1, Monday :—Senior Examinations.
June 8–13 :—Final Examinations.
June 15 :—Annual Encampment begins.
June 23, Tuesday :—Sheldon Prize Speaking.
June 24, Wednesday :—Annual Meeting of Trustees. Junior Exhibition.
June 25, Thursday :—Annual Commencement.
June 26, Friday :—Entrance Examinations.



Associate Alumni and Past Cadets.

By action of the Trustees, the Alumni and Past Cadets are entitled to elect one of the Board of Trustees each year. At a meeting held on Wednesday, June 26, 1889, it was decided that the meetings of the Association shall hereafter be held annually on the day preceding Commencement, at ten o'clock in the forenoon.

OFFICERS FOR 1889-90.

President:

C. L. STEDMAN, '57, Boston, Mass.

Vice-Presidents:

CHAS. DOLE, '69, Northfield, Vt.
W. M. RUMBAUGH, '76, New York.
E. M. CARR, '79, Seattle, Wash.
M. A. HOWE, '82, Terre Haute, Ind.
F. S. PARKER, '84, Ellendale, Dakota.

Secretary:

J. B. JOHNSON, '79, Northfield, Vt.

Treasurer:

L. B. JOHNSON, '88, Northfield, Vt.

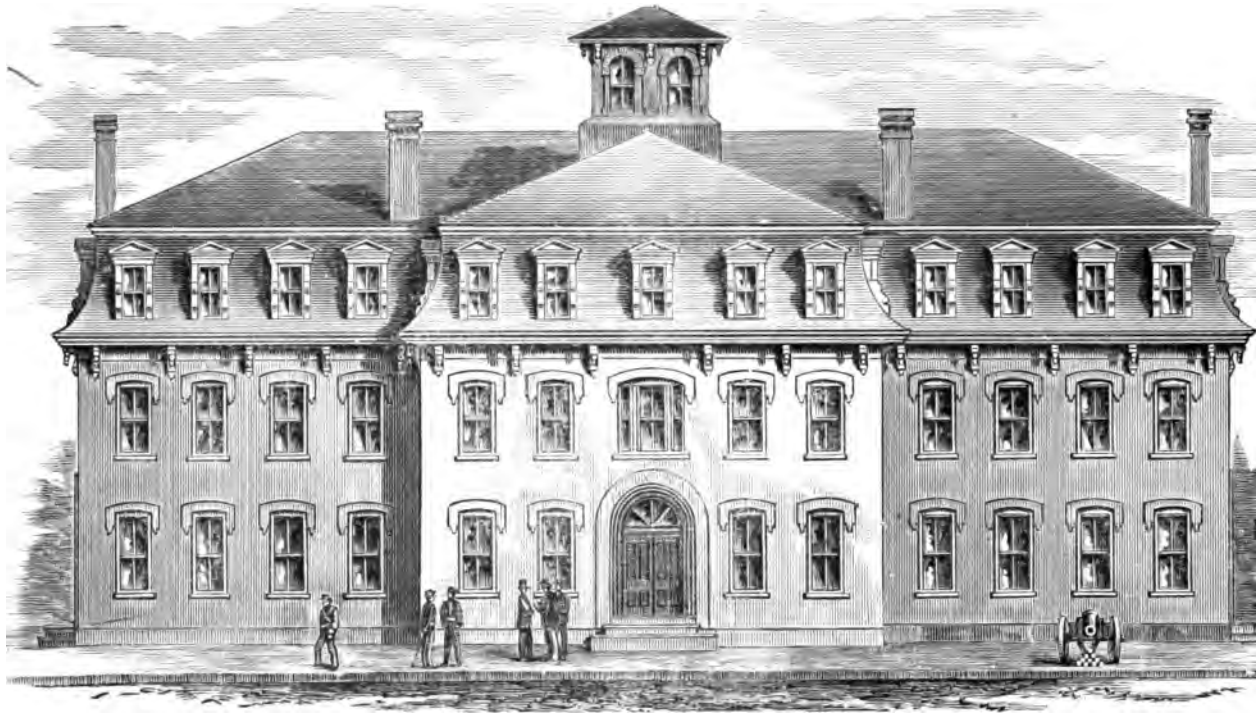
Treasurer of the Alumni Endowment Fund:

J. B. JOHNSON, '79, Northfield, Vt.

Committee on Increasing the Alumni Endowment Fund:

N. L. SHELDON, '84, Norwood, Mass.
D. E. WILMARTH, '84, Boston, Mass.
R. L. IRISH, '89, Northfield, Vt.

Members of the Association not present may vote by written ballot at the annual election of Trustees. It is therefore important that each Past Cadet keep the Secretary informed of his full address, and notify him promptly of any change.



CADET BARRACKS.





CAPT. ALDEN PARTRIDGE,
FOUNDER.

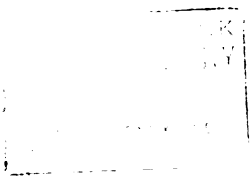
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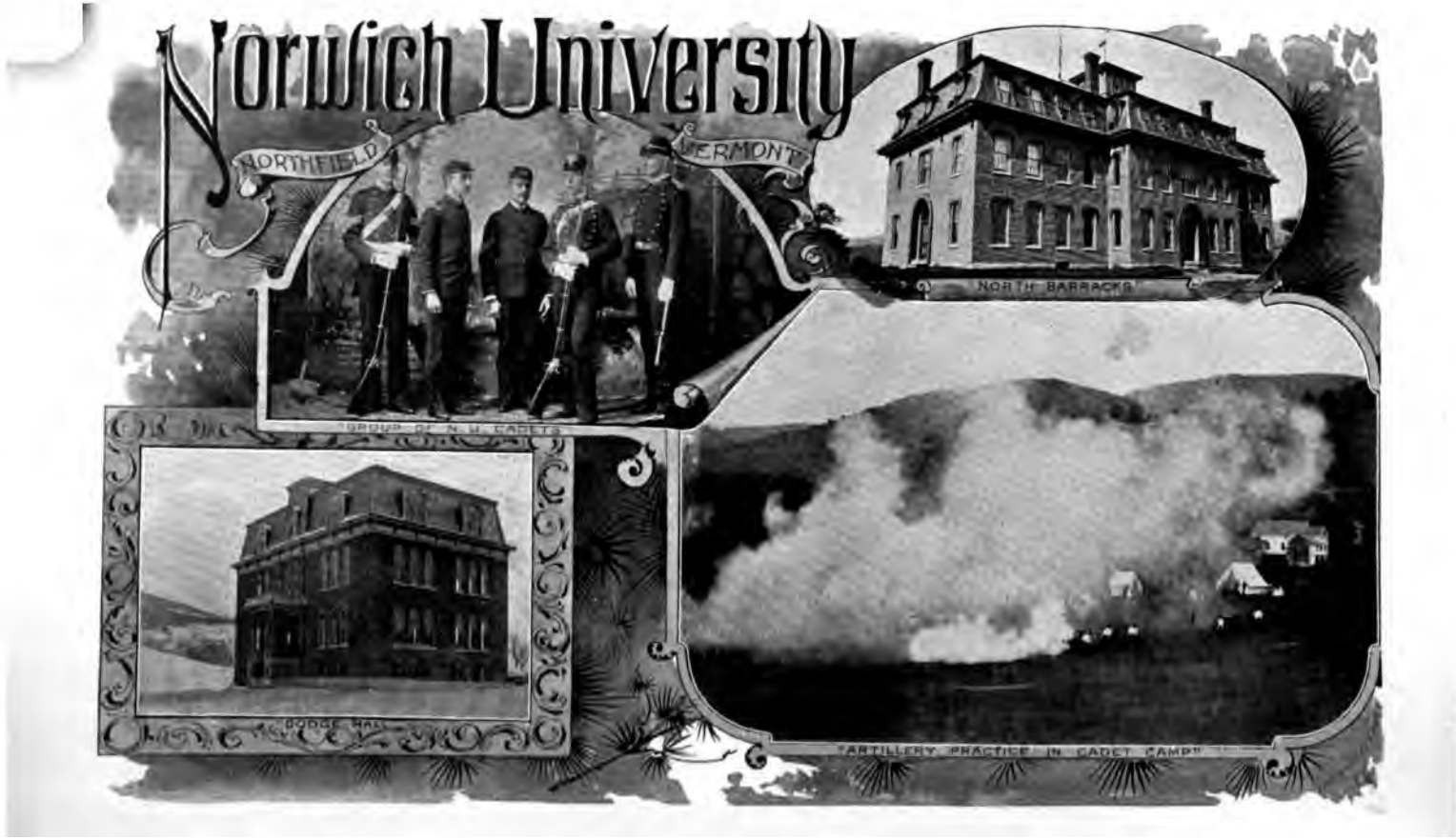
Norwich Universi

Northfield, Vermont.

1892.






Norwich University
NORTHFIELD
VERMONT
GROUP OF N. U. CADETS
NORTH BARRACKS
DODGE HALL
"ARTILLERY PRACTICE" IN CADET CAMP

FIFTY-EIGHTH ANNUAL CATALOGUE

— OF —

NORWICH UNIVERSITY.

MILITARY, SCIENTIFIC AND CLASSICAL.

NORTHFIELD, VERMONT.

Montpelier, Vt.
ARGUS AND PATRIOT PRINTING HOUSE.
1885.







CAPTAIN ALDEN PARTRIDGE.

Founder.

Corporation.

President,

Acting President,

HON. GEORGE NICHOLS, M. D., LL.D.

Secretary,

JOSEPH K. EGERTON,

NORTHFIELD, VT.

Treasurer,

J. CAREY B. THAYER, ESQ.

TRUSTEES.

COL. HENRY O. KENT, A. M.,		Lancaster, N. H.
HON. GEORGE NICHOLS, M. D., LL.D.,		Northfield.
HON. PHILANDER D. BRADFORD, M. D., Ph.D.,		Northfield.
HIRAM ATKINS,		Montpelier.
COL. FRED E. SMITH,		Montpelier.
COL. GEORGE N. CARPENTER, A. M.,		Boston, Mass.
JOSEPH STEDMAN, M. D., A. M.,		Boston, Mass.
COL. CHARLES H. LEWIS, LL.D.,		Boston, Mass.
CHAUNCEY DENNY,		Northfield.
EDWIN PORTER, M. D., A. M.,		Northfield.
* JOHN P. DAVIS,		Northfield.
GEN. GRENVILLE M. DODGE, LL.D.,		New York City.
COL. GEORGE W. HOOKER,		Brattleboro.
J. C. B. THAYER,		Northfield.
WALDO P. CLEMENT, B. S.,		New York City.
CAPT. GEORGE W. HOBBS, A. M.,		Uxbridge, Mass.
WILLIAM B. MAYO, M. D.,		Northfield.
JOHN J. DEWEY, B. S.,		Quechee.
HON. FRANK PLUMLEY, LL.B.,		Northfield.
JOSEPH K. EGERTON,		Northfield.
N. LOUIS SHELDON, A. M.,	elected by Alumni, term expires 1895,	Norwood, Mass.
GEORGE D. THOMAS, Ph.B.,	" " " " 1896,	Waltham, Mass.
BURLEIGH F. SPAULDING, Ph.B.,	" " " " 1892,	Fargo, N. D.
JOHN R. MOORE, B. S.,	" " " " 1893,	Elizabeth, N. J.
CHARLES DOLE, A. M.,	" " " " 1894,	Northfield.

* Deceased.

Faculty.

Hon. GEORGE NICHOLS, M. D., LL.D.,
ACTING PRESIDENT.

CHARLES C. BRILL, A. M.,
SUPERINTENDENT.

JOHN B. JOHNSON, A. M., C. E.,
Professor of Mathematics and Civil Engineering.

CHARLES C. BRILL, A. M.,
Professor of Chemistry and Physics.

*.....
Professor of Greek and Latin.

GEORGE F. COLE, Ph.B.,
Professor of Modern Languages and English.

JESSE B. MOWRY, B. S.,
Professor of History and Political Economy.

FREDERICK C. KIMBALL, 2nd Lieut. 5th Inft., U. S. A.,
Professor of Military Science.

ASA HOWE, A. M., C. E.,
Professor of Engineering Field Work.

PHILANDER D. BRADFORD, A. M., Ph.D.,
Professor of Anatomy and Physiology.

FRANK PLUMLEY, LL.B.,
Lecturer on Constitutional and Commercial Law, and Social Science.

WILLIAM LINE, Observer U. S. Weather Bureau,
Instructor in Meteorology and Military Signaling.

HIRAM N. MATTISON,
Assistant in Chemical Laboratory.

LEROY C. HULBURD,
Instructor in Drawing.

* Supplied.

FREDERICK C. KIMBALL, 2nd Lieut. 5th Inft., U. S. A.,

COMMANDANT.

JOHN B. JOHNSON, Captain, N. G. V.,

QUARTERMASTER.

JESSE B. MOWRY, 1st Lieut., N. G. V.,

ADJUTANT.

GEORGE F. COLE, 2nd Lieut., N. G. V.,

PHILANDER D. BRADFORD,

SURGEON.

REV. HOMER WHITE,

CHAPLAIN.

JAMES EVANS,

Requirements for Admission.

All candidates for admission to the college must be at least fifteen years of age, and must present satisfactory evidence of good moral character.

TO THE COURSES IN CIVIL ENGINEERING, CHEMISTRY, AND SCIENCE AND LITERATURE.

Candidates are examined in the following studies:—

MATHEMATICS.—Arithmetic; Algebra to Quadratics; Geometry, First four books, Davies' Legendre or an equivalent.

ENGLISH LANGUAGE.—Grammar; Composition, with special attention to punctuation and the use of capitals.

GEOGRAPHY.—Physical and Political Geography.

HISTORY.—History of the United States.

TO THE COURSE IN ARTS.

In addition to the examination in Mathematics, English Language, Geography, and History, laid down for the course in Science, examinations are as follows:—

LATIN.—Cæsar's "Commentaries," four books, or Sallust's "Catiline"; Virgil's "Æneid," six books; Cicero, four orations.

GREEK.—Xenophon's "Anabasis," four books, or one hundred pages Goodwin's Greek Reader; Homer's "Iliad," two books.

Graduates from approved High Schools are admitted upon certificates.

Candidates not fully prepared in all the requirements are conditioned for a limited time, or placed in a preparatory class.

ADVANCED STANDING.

Candidates for advanced standing must pass satisfactory examinations in the studies already completed by the class which they propose to enter, and in those required for admission. Those, however, from other colleges, should bring certificates of honorable dismissal, and marks showing standing. The latter may, on approval by the Faculty, be taken in lieu of examinations.

Courses of Instruction.

COURSE IN MILITARY INSTRUCTION.

For all Students throughout the four years. Exercises, Drills or Lectures every day at 4 o'clock P. M.

FALL TERM.

Settings Up, Calls, Manual of Arms, School of the Company and Skirmish Drill; Bayonet Exercises indoors in bad weather.

WINTER TERM.

Broadsword and Sabre Drill, Manual of the Sword, and Fencing. Juniors and Seniors, Lectures on Military Engineering or Military Science and Art of War.

SPRING TERM.

Artillery Drill and School of the Battery, Battalion Drill, Ceremonies and Dress Parade, Review of all Drills, Signaling, Lectures on Customs of the Service, Camping and Modern Warfare, Rifle Practice.

The lectures in Military Science and Modern Warfare embody ancient warfare and tactics, field fortifications, field engineering, military tactics, artillery duty, principles of gunnery; the attack and defence of fortified places, operations of the siege; attack and defence of a province, and principles of base line of operations, torpedo service and other modern means of warfare. These lectures are illustrated by maps and charts of

modern sieges and battles. The lectures in Military Science alternate every other year with those in Modern Warfare, which requires the Junior and Senior classes to attend them.

The Cadets are at all times under military discipline, and strict observance of military customs is required.

Cadets assume the duties of Adjutant, Officer of the Day, Guard, etc., in their turn, and are instructed in making out the different kinds of military reports; and, in short, are trained in all the duties incident to field or garrison.

Military exercises and duties are so arranged as not to occupy any of the time that would otherwise be devoted to study. They are attended to at those hours which are generally passed by students in idleness, or devoted to useless amusements, for which they are made a pleasant, healthful and profitable substitute. They develop that bearing and those manly arts which always distinguish the soldier, while affording excellent physical training.

Military training prepares a young man's body, as discipline prepares his mind, to meet, with dignity and coolness, the emergencies sure to arise in his life, whatever his profession may be, and in moments of excitement or danger gives him that firmness and self-control which characterize the gentleman.

Norwich University numbers among its graduates many names which stood high in the profession of arms during the war with Mexico and the War of the Rebellion, and at the present time many of her graduates are serving with distinction as Officers of the National Guard and of the Regular Army of the United States.*

Examinations are held in tactics, orders, duties and customs of military service, to insure familiarity with them.

* A member of the last graduating class (Cadet Capt. Shuttleworth, now 2nd Lieut. 11th United States Infantry, was selected by the Secretary of War for appointment into the Regular Army.

Courses of Study.

Four regular courses have been established, as follows:—

I. A course in Civil Engineering.
II. A course in Chemistry.
III. A course in Science and Literature.
IV. A course in Arts.

The courses in Civil Engineering and Chemistry have a distinctly practical bearing, and give a thorough training for the technical professions.

The course in Science and Literature is intended for such as may not wish to pursue a full course in Mathematics, or one for a distinctly scientific profession, and is designed to furnish a liberal preparation for the professions.

Each of these courses extends through four years, and is intended to give the student a liberal culture.

Changes are made in the course in Chemistry to meet the wants of students preparing for Medicine and Pharmacy.

Courses in Science.

FRESHMAN YEAR.

FOR ALL COURSES EXCEPT THE COURSE IN ARTS.

NOTE.—The figures after each subject indicate the number of recitations per week, or its equivalent.

FALL TERM.—Algebra, 5; French or German, or Latin, 5; Inorganic Chemistry, 5, (text, 3; laboratory, 2); Rhetoric, 2; Free Hand Drawing, 6; English, 1.

WINTER TERM.—Geometry, 5; French or German, or Latin, 5; Inorganic Chemistry, 5, (text, 3; laboratory, 2); Rhetoric, 2; Lettering, 3; Tinting and shading, 3; English, 1.

SPRING TERM.—Trigonometry, 5; French or German, or Latin, 5; Inorganic Chemistry, 5, (text, 3; laboratory, 2); Rhetoric, 2; Mechanical Drawing, 6; English, 1.

I. THE COURSE IN CIVIL ENGINEERING.

Leading to the Degree of Civil Engineer.

SOPHOMORE YEAR.

FALL TERM.—Analytical Geometry, 5; German or French, 5; Mechanics and Heat, 5; Descriptive Geometry, 3; Descriptive Drafting, 6; English, 1.

WINTER TERM.—Differential Calculus, 5; German or French, 5; Electricity and Magnetism, 5; Descriptive Geometry, 3; Shades and Shadows, Linear Perspective, and Isometrical Projection, 6; English, 1.

SPRING TERM.—Integral Calculus, 3; Land Surveying, Leveling, and Field Work, Use and adjustments of compass, transit, and level, 6; (text, 2; field work, 4;) German or French, 5; Acoustics and Optics, 5; Detail Drawing, Tracing and Blue Prints, 6; English, 1.

JUNIOR YEAR.

FALL TERM.—Mechanics of Engineering—Statics and Dynamics, 5; Geology, 5; Colored Topography, Pen Topography, and plotting of Surveys, 6; Advanced Surveying—Topographical, Municipal, and Geodetic (Use of stadia and plane table), 6; (text, 2; field work, 4); English, 1.

WINTER TERM.—Mechanics of Engineering—Materials, 5; Blow-pipe Analysis and Determinative Mineralogy, 4; Qualitative Analysis, 6; Theory of Trusses and Arches, 3; Graphics of Trusses and Arches, 6; English, 1.

SPRING TERM.—Bridge Stresses, 3; Stone Cutting, 2; Meteorology, 2; Mechanics of Engineering—Hydraulics, Retaining Walls, Masonry Dams, 3; Botany, 3; Drawing—Bridge Stresses, 4, Stone Cutting, 2; English, 1.

SENIOR YEAR.

FALL TERM.—Commercial Law, 5; Metallurgy, 2; Bridge Designing (lectures), 2; Railroad Engineering (curves, turn-

outs, and actual location of railway), 6; (text, 2; field work, 4;) Drawing.—Design of Bridges 6; English, 1.

Winter Term.—Constitutional or International Law, 5; Hydraulic and Sanitary Engineering, 3; Civil Engineering—Materials of Engineering, Foundations, Canals, Highways, 5; Design of Engineering Structures, 6; English, 1.

Spring Term.—Spherical Astronomy.—Determination of time, latitude, etc., 3; Contracts and Specifications, 2; Political Economy, 5; Hydrographic Surveying (text, and field work), 2; Railroad Engineering, 3; Preparation of Thesis, 5.

II. COURSE IN CHEMISTRY.

Leading to the Degree of Bachelor of Science in Chemistry.

SOPHOMORE YEAR.

Fall Term.—Chemical Technics, 5; French or German or Latin, 5; Mechanics and Heat, 5; Qualitative Analysis, 10; English 1.

Winter Term.—French or German or Latin, 5; Electricity and Magnetism, 5; Blow-pipe Analysis, 10; English 1.

Spring Term.—Botany 3; French or German or Latin, 5; Acoustics and Optics, 5; Qualitative Analysis 10; Land Surveying, 6, (text 2, field work, 4); English 1.

JUNIOR YEAR.

Fall Term.—Ancient History, 5; Geology, 5; Organic Chemistry, 2; Gravimetric Analysis, 14; Zoology 3; English 1.

Winter Term.—Logic, 5; Organic Chemistry, 2; Volumetric Analysis 15; English 1.

Spring Term.—English Literature, 5; Organic Chemistry,

SENIOR YEAR.

FALL TERM.—Commercial Law, 5; Metallurgy, 2; Toxicology, 8; Medical Chemistry, 5; Medieval and Modern History, 5; English, 1.

WINTER TERM.—International Law 5; Water Analysis, 10; Agricultural Chemistry, 10; English, 1.

SPRING TERM.—Political Economy, 5; Gas Analysis, 10; Thesis, 5; Assaying, 4.

III. COURSE IN SCIENCE AND LITERATURE.

Leading to the Degree of Bachelor of Science.

SOPHOMORE YEAR.

FALL TERM.—Analytical Geometery, 5; French or German or Latin, 5; Mechanics and Heat, 5; History of England, 5; English, 1.

WINTER TERM.—French or German or Latin, 5; Electricity and Magnetism, 5; Differential Calculus, 5; English, 1.

SPRING TERM.—French or German or Latin, 5; Acoustics and Optics, 5; Analytical Chemistry, 5; Botany, 3; Land Surveying, 6; English, 1.

JUNIOR YEAR.

FALL TERM.—French or German or Latin, 5; Geology, 5; Zoology, 3; Ancient History, 5; English, 1.

WINTER TERM.—French or German or Latin, 5; Blowpipe Analysis, 4; Logic, 5; Analytical Chemistry, 10; English, 1.

SPRING TERM.—French or German or Latin, 5; English Literature, 5; Psychology, 5; Constitutional Law, 5; English, 1.

SENIOR YEAR.

FALL TERM.—French or German or Latin, 5; Medieval and Modern History, 5; Commercial Law, 5; Metallurgy, 2; English, 1.

WINTER TERM.—French or German or Latin, 5; Ethics, 3; International Law, 5; Criticism of English Prose, 5; English, 1.

SPRING TERM.—French or German or Latin, 5; Political Economy, 5; Contracts and Specifications, 2; Astronomy, 3; Thesis, 5.

IV. COURSE IN ARTS.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

FALL TERM.—Algebra, 5; Memorabilia and Greek Prose, 5; Livy and Latin Prose, 5; Rhetoric, 2; Free Hand Drawing, 6; English, 1.

WINTER TERM.—Geometry, 5; Herodotus, 5; Cicero Tusculan Disputations and Roman History, 5; Rhetoric, 2; Tinting and Shading, 3; Lettering, 3; English, 1.

SPRING TERM.—Trigonometry, 5; Homer's Odyssey and Grecian History, 5; Horace's Odes, 5; Rhetoric, 2; Mechanical Drawing, 6; English, 1.

SOPHOMORE YEAR.

FALL TERM.—Sophocles, 5; Juvenal's Satires, 5; Mechanics and Heat, 5; English, 1.

WINTER TERM.—Euripides, 5; Tacitus, 5; Electricity and Magnetism, 5; English, 1.

SPRING TERM.—Æschylus, 5; Tacitus, 5; Acoustics and Optics, 5; Botany, 3; English, 1.

JUNIOR YEAR.

FALL TERM.—Demosthenes, 2; Pliny, 3; Geology, 5; French or German, 5; Inorganic Chemistry, 3; English, 1.

WINTER TERM.—Plato, 2; Plautus, 3; Logic, 5; Inorganic Chemistry, 3; French or German, 5; English, 1.

SPRING TERM.—Greek Syntax, 2; Latin Syntax, 3; French or German, 5; Inorganic Chemistry, 3; English, 1.

SENIOR YEAR.

FALL TERM.—Land Surveying, 5; Analytical Chemistry, 5; French or German, 3; Commercial Law, 5; English, 1.

WINTER TERM.—Blow-pipe Analysis, 4; French or German, 3; International Law, 5; Elements of Criticism, 5; Mental and Moral Philosophy, 3; English, 1.

SPRING TERM.—Zoology, 3; French or German, 3; Political Economy, 5; Thesis, 5; Spherical Astronomy, 3;

Military instructions throughout all courses the same as laid down in the Military Course.

TEXT BOOKS.

MATHEMATICS.—Astronomy, Young. Algebra, Wells' University. Analytical Geometry, Loomis. Calculus, Taylor. Geometry, Davies' Legendre. Mechanics, Church. Trigonometry, Davies. Descriptive Geometry, Church.

ENGINEERING.—Land Surveying, Hodgman. Advanced Surveying, Johnson. R. R. Surveying, Searles. Bridge Stresses, Merriman. Civil Engineering, Mahan and Trautwine. Specifications, Haupt. Hydraulic Engineering, Fan-

ning. Sanitary Engineering, Latham, Philbrick. Stereotomy, Warren.

Sciences.—Botany, Gray's School and Field Book. Chemistry, Analysis, Qualitative, Fresenius. Volumetric Analysis, Appleton and Sutton. Analysis, Quantitative, Appleton, Fresenius. Organic Industrial Chemistry, Sadtler. Blowpipe, Plattner's Qualitative and Quantitative, by Cornwall. Metallurgy and Assaying, Hiorn's Text-Book of Elementary Metallurgy, Hiorn's Practical Metallurgy and Assaying. Agricultural Chemical Analysis, Frankland. Medical Chemistry, Ralfe's Clinical Chemistry. Inorganic, Shepard. Organic, Remsen. Physics, Gage's Elementary, with lectures on special subjects. Zoology, Packard. Geology, Winchell's Geological Studies. Mineralogy, Dana's Manual, and Foye's Tables. Food Adulteration and its Detection, Battershall.

History, Political Science, and Law.—History, General History, Webber; Grecian, Smith; Roman, Merivale; Mediæval and Modern, Myers; English, Green. Political Science, Perry. Psychology, Sully. Logic, Jevon. Ethics, Robinson. International Law, Woolsey. Constitutional Law, Cooley. Commercial Law, Townsend.

Modern Languages.—French: Stern's *Étude Progressive de la Langue Française;* Edgren's French Grammar; Super's French Reader; French Literature. German; Stern's *Studien und Plaudereien;* Otis' German Grammar; German Literature.

English.—Rhetoric: Clark's Practical Rhetoric; Genung's Practical Rhetoric. Elocution; Clark's Notes on Reading; Bacon's Manual of Gesture. English Literature, Welsh.

DEGREES.

The candidate for any degree must deposit with the Faculty a satisfactory thesis on some scientific or literary subject connected with his department.

DEGREES ON GRADUATION.

The degree of Civil Engineer is conferred upon any student who has completed the course in Civil Engineering.

The degree of Bachelor of Science is conferred upon any student who has completed the course in Science and Literature.

The degree of Bachelor of Science is conferred upon any student who has completed the course in Chemistry.

The degree of Bachelor of Arts is conferred upon any student who has completed the course in Arts.

ADVANCED DEGREES.

The Master's degree in Science or Arts is conferred upon graduates of this University of three years' standing who have taken the corresponding Bachelor's degree, and who, during that time, have been engaged in professional, literary or scientific pursuits, or have pursued a course marked out by the Faculty, for two years after graduation, and passed the examinations.

The degree of Master of Civil Engineering is conferred upon graduates in Civil Engineering of three years' standing, who have pursued the profession of engineering during that time, have passed the requisite examinations, and have presented a satisfactory thesis; or upon graduates who have completed a post-graduate course.

SUBJECTS AND METHODS OF INSTRUCTION.

ENGINEERING.

The work of the first year in this department is common to all courses. The thorough training of the eye and hand in Freehand Drawing is of the greatest importance in all subsequent drafting. The course embraces accurate outline drawing, elementary perspective, sketching, object drawing, pencil shading and designing. The effort is made to produce designers, instead of mere copyists. Practice in lettering, large and small drawings, general orders, etc., also in tinting and shading with the right line pen, and with brush and water colors, is given in the second term. Neatness of text, and rapidity of execution are aimed at. In the third term, dexterity in handling drafting instruments is acquired. Various applications of geometry to drafting, and the orthographic and isometric projections of joints and splices in wood construction are taught. Descriptive Geometry is taught in the fourth and fifth terms with special reference to its applications to shades and shadows, machine construction, stone cutting, and to the design of stone bridges, culverts, spiral stairways, sewer intersections, etc.

The course in bridges begins with the drawing of details, which are measured by students while visiting engineering structures. Thus, while the student acquires facility in drawing, he becomes familiar with the various details of a bridge. An extended course in Bridge Stresses is given in the ninth term, and in the tenth term the student is given specifications, and required to apply his theoretical knowledge in designing railway and highway bridges of wood, iron, and steel, even to the minutest details. In Pen Topography and Colored Topography the students use the conventions for map making, and

apply them in the maps platted from the land and railroad surveys.

An extended course in Applied Mathematics, or Mechanics of Engineering is given, in which engineering problems concerning rigid bodies at rest or in motion, the strength of engineering materials, and the statics and dynamics of liquids and gases, are practically treated.

The laboratory work of the eighth term and the Metallurgy of the tenth enable the student to study the materials of engineering with regard to strength and constituents. Under Hydraulic, Sanitary, and Civil Engineering, the design and construction of water supply and distribution systems, sewerage systems and sewage disposal, and of canals, tunnels, foundations in water and on land, and river and harbor improvements, are treated.

Six hours of drafting per week are required throughout the course, and while the above subjects are being studied, numerous designs of engineering structures are made in the drafting room. In the Reading Room are placed the best of engineering periodicals, which give descriptions of all new works of special interest, and enable the student to keep up with the latest methods of construction.

In Land Surveying and Leveling, practice in using and adjusting instruments is given, and the most approved methods of map making, dividing up and parting off land, and supplying omissions in old surveys are taught both in class-room and field. The advanced surveying of the seventh term includes Topographical, Geodetic, and City Surveying, with field work, and practice in the drawing room.

The Hydrography of the last term consists of lectures, recitations, and practice on neighboring bodies of water. In Railroad Surveying, the field work consists of preliminary surveying, final location, slope staking, etc. Office work is given in making contour maps of the line, profiles, earthwork calculations, estimates of cost, etc. The lectures on Economic Railway Location enable the students to decide between two or

more proposed railway lines, and to reduce expenditures in the operation of lines already built.

As one of the professors of Civil Engineering is the Chief Engineer of a railroad, the students of this course have exceptional opportunities for valuable practice under his direction.

In the last term students are required to make specifications, and contracts for engineering projects of their own design. The course given in this term in Astronomy provides the engineer with as much of this subject as his profession requires.

EQUIPMENT.—The department has a collection of designs for Freehand and Perspective Drawing, and for modern houses, cottages, public buildings and architectural details. It has also collections of blue prints of the best modern bridges, including pivot draws, plate girders, and various types of pin-connected and riveted trusses, and blue prints of sewer details and sewer constructions. It has a collection of models of wooden splices and joints used in bridge construction and carpentry, and of details of machine construction.

The department has procured the best modern instruments for angle and line measurement, including transits, compasses, levels, plane table, sextant, rods, chains, etc., and is prepared to give as much of practical engineering field work as can be given in schools, with the first-class instruments now used in modern engineering.

Special acknowledgement is due for the following gifts to the department since September, 1891:

General Grenville M. Dodge—A fine Transit Theodolite.
Students of the Department—A straight-edge Beam Compass.

MATHEMATICS.

In the department of Mathematics, sufficient attention is paid to practical applications to enable students to see the utility of their studies, and to assist them in the scientific professions.

Theory is developed in as careful and complete a manner as possible, in order that the student may receive that mind

discipline which is so valuable an equipment for all pursuits, whether technical or general.

The clearest and most concise text-books are sought for; abstruse and unprofitable discussions are avoided; original work is encouraged, and students are called on for personal recitations more frequently than in most institutions of similar character.

GEOLOGY AND MINERALOGY.

The treatment of Geology consists of text-book work, supplemented by frequent excursions in the field, in which the many interesting features of the region are examined. Colored maps representing the geological formations of counties or larger sections, are required. Mineralogy is taken up in connection with Geology, the student being required to identify minerals by their physical properties. In connection with this work, each student is required to make a collection of fifty minerals, which he determines and classifies. To aid him in this work he is given instruction in Blow-pipe Analysis and Determinative Mineralogy.

HISTORY AND POLITICAL SCIENCE.

The course in History affords a connected and comprehensive view of the history of civilization from the earliest times to the present. By investigating the causes which underlie the world's history, the instruction aims, not only to train the memory and develop the reasoning faculties, but to fit men to deal wisely with those practical social questions of the present, upon whose solution the experience of the past throws the most valuable light. Particular attention is given to the political development of England and of the United States.

Political Economy is taught in the Senior year by means of text-books, lectures, and informal discussions. A theoretical view of the subject is followed by a practical study of Land and Labor Questions, Socialism, Finance, Public Credit, the Principles of Taxation, and Tariffs.

PSYCHOLOGY.

An examination of the different sources of knowledge, an analysis of the various mental states, and a classification of the faculties, are followed by a study of the relation of psychology to education, for the benefit of those students who may desire to engage in teaching. The laws governing the processes of acquiring and reproducing knowledge, the development of the faculties together with the ways in which they interact one on another, and the play of motives, furnish the foundation of rational instruction and government, and are of special value to the teacher.

LOGIC.

Logic is taught by recitations and informal lectures. The objects of this study are to give the student vigorous mental discipline, training in exactness and certainty in thinking, skill in detecting fallacy, and assistance in all the sciences by directing attention upon those points of method in each science, which the cultivator is apt to neglect in his zeal for the subject-matter of each.

The unfolding of the laws of thought by an analysis of the Notion, Judgment, and Reason is made the basis of many exercises in the opposition and conversion of propositions, logical division, definition, classification, analysis, synthesis, application of the rules of the syllogism to arguments, and the detection of fallacies. In Induction, the methods of scientific investigation and proof are considered in connection with a study of the history of some one of the natural sciences.

MODERN LANGUAGES.

The chief aim of this department is to enable the student to read French and German with ease and fluency,—by which is meant, not merely the ability to translate, but to read and understand the language in itself, independently of translation. To this end, the languages are taken up at first conversationally, the instructor speaking to the class and requiring answers from them in the language they are studying, without the use

of English. By this method it is intended, not only to familiarize the ear with the spoken language, and thus to lay the best groundwork for conversation, but also to render easy and intelligible the grammar work and reading which follow.

After a thorough course in the essentials of grammar, accompanied with composition and the reading of easy prose, are read various selections of prose and poetry from the best authors.

Much attention is given to the relation of the languages to English and to each other, especially in the matter of derivative and cognate words.

To enrich the student's English vocabulary, to cultivate his taste for good literature, and to broaden his mental horizon, are further objects of the instruction.

RHETORIC, ENGLISH CRITICISM, AND ELOCUTION.

The instruction in this department aims to deal in the most practical way with the composition and delivery of good English. The work, which is uniform in all courses, is continuous throughout the four years.

In Rhetoric, to which subject is devoted two hours each week during the Freshman year, much of the time is spent in the application of the principles of Rhetoric to the correction of faulty sentences. This instruction is supplemented, during the remainder of the course, by lectures on the higher qualities of style, made in connection with the essay work. As to punctuation, paragraphing, etc., students are required to present their essays and manuscript orations in proper form for publication.

In English Criticism, while it is sought to eradicate faults of style, especial attention is given to the development of the student's individuality and power of expression. An important feature is the critical examination of English prose masterpieces, which is made in connection with the study of English Literature. Essays and orations are carefully revised, returned to the writers for correction, and afterward read and criticis-

ed in class. That the student may learn to study his subject comprehensively, and to arrange its parts logically, instruction is given in the formation of essay outlines.

In Elocution, the chief ends sought are distinct and forcible utterance, just emphasis, and ease and naturalness of expression.

RHETORICALS.

Friday afternoon of each week is devoted by the entire corps of cadets to rhetorical exercises, in which each cadet is required to take part every third week. The exercises are varied, consisting of declamations, essays, orations, debates, presentation and acceptance speeches, etc. Much stress is laid upon the subject of extempore speaking. Each cadet is required to rehearse before a member of the faculty before appearing at rhetoricals. At the close of each rhetorical session, the members of the faculty make criticisms and suggestions upon the work done. Occasionally, in place of the regular rhetorical work, the corps organizes itself into a senate or other deliberative body, to gain familiarity with parliamentary law.

Experience has shown that four years of participation in these exercises insures, even to the diffident, that ease and fluency in public speaking which is so important a factor in the various walks of life.

BOTANY.

The course in Botany begins in the spring term of the Sophomore year, and comprises Vegetable Morphology and Physiology, Plant Analysis, and the preparation of Herbaria.

The life history of vegetation is traced from seed through stems and roots, leaves, branches, buds, flowers and fruit, to seed again.

Gray's Lessons are used, with lectures and field-work. The fall term is devoted mainly to Classification and Histology. A few of the more difficult orders of Phænogams are studied.

Attention is given to the various kinds of parasitic fungi so destructive to crops.

ZOOLOGY.

Structural Zoology is taught by recitations and by laboratory demonstrations. Dissections and drawings are made of representative species in each group of animals. The purpose of this course is to give the student a definite conception by means of sense-images of the characteristic structure of the leading modifications of the Animal Kingdom.

PHYSICS.

The treatment of Physics consists of text-book work, with frequent experiments. The work in Mechanics is still further treated under a separate head. Especial attention is given to Electricity and Magnetism, and the student is required to do actual work in wiring, etc., making computation of resistance in telegraph and electric light wires. He is also taught the principles of various electrical machines, and is encouraged to make models. The class is taken to visit electric plants, where the principles taught in the class room are practically applied.

CLASSICS.

It is the aim of the Classical Department to make the work as thorough as possible, and to drill the students particularly in parsing and construction. In this manner not only a thorough knowledge of the language is obtained, but the greatest possible amount of mental discipline is derived. The similarity and connection between the Latin and Greek on the one hand, and the English on the other, are shown and commented upon by the professor. The Greek and Latin roots from which our English words are derived, are pointed out. Care is taken that the student translate into good English, that he may thus improve his knowledge of English in the study of the Classics.

CHEMISTRY.

The study of Chemistry is begun by students in all courses, except that of Arts, in the Freshman year. It consists during this year of lectures and recitations upon general Inorganic Chemistry, in which the principles of the science are brought out and fully explained. Following this is a description of the properties of elements and compounds and of the methods used for preparing them. To bring this work more clearly before the student a large number of experiments are performed before the class, in many of which the students are permitted to assist.

In addition to the recitations, two hours a week are devoted to laboratory practice, in which the student performs for himself the experiments given in the section room. The second year's work is intended for those who take the Chemical Course, and consists of daily laboratory practice, together with recitations and lectures upon Chemical Technics. The work of this and of the following years is performed by the students themselves, under the direction of the professor and his assistant. Qualitative examinations of minerals, commercial products, fertilizers, drugs and medicines, are made, and as the student becomes more advanced, Quantitative examinations of the same substances are made. For those students desiring to fit themselves for the study of Medicine and Pharmacy, special instruction is provided in the Chemical Laboratory.

FINALLY

It is the aim in all of the departments of the University to teach students the practical application of what they study. Mere theories are of little value unless the student can apply them successfully. Too many college graduates have failed in their professions from being unable to apply theory to practice, and it is this lack which we endeavor to supply in our students.

Brief Sketch of Norwich University.

This institution was founded in 1819, by Capt. Alden Partridge, of whom a cut appears in this Catalogue, and was known as the American Literary, Scientific and Military Academy. It retained the name until November 6, 1834, when a charter of incorporation was granted it by the State of Vermont, under the name of Norwich University.

Thus was founded the FIRST Scientific, Classical, and Military College in the United States. This new departure met with universal favor, and its halls were soon crowded with young men from every State in the Union.

In March, 1866, the University buildings at Norwich were destroyed by fire, and the University was removed to Northfield, Vt., where the citizens had offered fine grounds and commodious barracks. Here the same system of instruction and military discipline is maintained, and many young men have been enabled to go forth to fill high positions in various professions.

This was the first institution in the country to lay down a purely scientific course of study, and up to the time of the Rebellion the only one which embraced in its curriculum thorough Military, Classical, and Scientific courses. By her work for half a century, Norwich University merits the confidence of the public. Special attention having been given to Military Science and Engineering, her graduates have become particularly distinguished as army officers and civil engineers, some having risen to the foremost rank.

The Roster of Alumni and Past Cadets contains more than fifteen hundred names, and the Institution is to-day in a most prosperous condition.

SCHOLARSHIPS.

The State Legislature has provided for thirty free scholarships, according to the following act from the laws of 1884:—

AN ACT RELATING TO THE APPOINTMENT OF CADETS TO NORWICH UNIVERSITY.

SEC. 1. There shall be admitted, free of charge for tuition and room rent, to the Norwich University, at Northfield, as many students from each county in the State, as there are Senators from such county in the general assembly, who shall be instructed in all departments of learning taught in said University, and be subject to all the rules and regulations of said school.

SEC. 2. The Senators in each county shall designate and appoint the cadet or cadets from such county to the said University, and, whenever a vacancy occurs from such county for any cause, fill the same; said appointments to be made by competitive examinations, in the month of June in each year, and whenever a vacancy shall exist.

SEC. 3. Whenever the Senators from any county shall fail to fill any vacancy from such county for one month after being notified of the same by the Trustees of said University, the trustees may fill the same by appointing from the county if there are any applicants who pass the examination required by the rules of said University, and if not, then from any county in the State.

SEC. 4. The Auditor of Accounts shall draw his order on the Treasurer of the State, payable to the Trustees of said University or the Treasurer thereof, for the sum of fifty dollars for each cadet so attending said University, appointed as above, which shall be in full payment for tuition and room rent for such cadets, said tuitions to be payable in conformity with the rules of said University now existing as to the payment of tuitions, on the sworn statement of account of the President or Vice-President of said University, and to be paid by the first day of June in each year.

SEC. 5. This act shall take effect from its passage.

Approved November 25, 1884.

Young men residing in Vermont who may be desirous of obtaining a State cadetship should first apply to the Superintendent of the University for information as to whether a vacancy in their county exists. Learning of a vacancy, application should then be made to the Senators of the applicant's county.

In addition to the above there have been created twelve half-scholarships by the benevolent friends of the University.

Young men desiring to take advantage of the cadetships hereby offered, should address the SUPERINTENDENT, at Northfield.

General Information.

EXPENSES.

A prominent feature of the University is the very reasonable charges for instruction and the low expense of living. The charge is $65 per year, for instruction, room rent and incidentals. Students pay for board and laundry at the University Mess Hall $3.25 per week, which makes the whole expense less than the living expenses alone in cities, and at other institutions of learning.

The following table gives a statement of the expenses:—

Tuition per College Year,	$45.00
Room-rent,	15.00
Library and Contingent Expenses,	5.00
Board and Laundry, thirty-six weeks,	117.00
Total for year,	$182.00

Uniform complete, including Regulation Fatigue Suit and Dress Coat; Helmet and Fatigue Cap $40.00.

The charge for room rent is based upon the supposition that two students occupy the same room. Rooms are unfurnished. Students bring bed linen, blankets, and towels. Second hand furniture can be bought at low prices, and sold at a slight reduction.

A room can be furnished at a cost of from $10 upwards, to each occupant.

Cadets who are appointed buglers receive $50 per year for their services.

Bills are payable strictly in advance.

Students in the course in Chemistry are required to deposit $10 at the beginning of each term of the Sophomore year, and

$15 at the beginning of each term of the Junior and Senior years, the amount not consumed being returned at the end of each term.

In the Engineering course, $3 is charged for chemicals in the second term of the Junior year. In the other courses a fee of $5 per term is charged for Qualitative Analysis, and $3 per term for Blow-pipe Analysis.

One dollar per term is charged members of the Freshman class taking the laboratory work in connection with Inorganic Chemistry, for chemicals.

These charges are for chemicals, and do not include breakages, or waste of materials. The average expense for materials to students in the Chemical course, is from $6 to $8 per term.

The Central Vermont and the Wells River railroads allow students half fare.

The Passumpsic railroad allows free return checks to students paying full fare in coming to attend the University.

For further information address either the ACTING PRESIDENT, or the Superintendent, at Northfield, Vt.

BUREAU OF INFORMATION.

There has recently been established by the University, a Bureau of Information. It is intended that this Bureau shall serve in assisting graduates in obtaining desirable positions as Teachers, Engineers, Architects and Chemists. Those of the Alumni who desire such positions should send their addresses to the Superintendent, that they may receive the benefit of the numerous applications for men, of which the University is constantly in receipt. The value of this feature is attested by the comparatively large number of graduates who since its establishment have found lucrative positions without trouble or expense to themselves.

THE REVEILLE.

The cadets conduct a monthly magazine devoted to the in-

terests of the University, the Alumni, and the Corps itself. Upon this paper excellent drill in journalism is afforded the cadets.

READING ROOM.

A reading room is maintained by the cadets, which is provided with the leading literary, political and technical periodicals of the day.

DODGE HALL.

Through the generosity of General Grenville M. Dodge and other friends, the Trustees have been enabled during the past year to erect a four story brick building to meet the increasing needs of the University for section rooms and laboratories.

GYMNASIUM AND DRILL HALL.

The University has recently acquired possession of a commodious building, which will be used as a Gymnasium and Drill Hall.

MESS HALL.

The University Mess Hall is a large building, in which several members of the Faculty with their families reside, and where they, with the corps of cadets, take their meals.

STUDENTS' SOCIETIES.

Two literary societies exist among the students, in which valuable literary work is done, while at the same time social privileges are enjoyed. These societies are in every way approved by the authorities.

STUDENTS ENTERING

should report upon arrival to the Superintendent, who will

give them all necessary instructions as to examinations, etc. The Superintendent will also assign each new student to quarters in Cadet Barracks.

SPRING ENCAMPMENT.

The last two weeks of the spring term are spent in camp, and the Corps receives instruction in all the details of camp life, together with guard duty. While in camp a general review of all the drills is made to insure familiarity with them. During this encampment considerable time is devoted to attack and defence of camp, and to rifle practice.

EXTENDED MARCHES.

The encampment may be varied by extended marches about the State. During the encampment and on the march the Corps is at all times under the command of the Commandant of the University, who is responsible for the conduct of the Cadets.

RELIGIOUS FEATURES.

Prayers are held before the opening of academic exercises on each week-day morning. The following clergymen, who are the active resident clergymen of the town, conduct morning exercises: Rev. William S. Hazen, D. D.; Rev. H. L. Thornton, Rev. Joseph Hamilton, and Rev. Homer White. On Sunday morning each cadet is required to attend divine service with some one of the village congregations, the choice being made at the beginning of the term by the cadet himself if of age, or, otherwise, by his parents or guardians, and adhered to throughout the term. The societies of the village are: Congregationalist, Episcopal, Methodist, Roman Catholic, and Universalist. While cadets are held to a strict observance of the rules for religious exercises, and while all immor-

alities are carefully guarded against, yet the institution is in every respect non-sectarian.

Y. M. C. A.

There has recently been established by the students a branch of the Intercollegiate Young Men's Christian Association, which is an organization of students and professors for the promotion of their religious culture and for Christian work in the University.

CADET BAND.

The cadets support a Cornet Band of fifteen pieces, which is a very pleasant and important feature of the institution, being essential to parades, and marches, and at the same time furnishing a pleasant and profitable diversion for the cadets themselves.

PRIZE SPEAKING.

Through the generosity of Mr. N. Louis Sheldon, class of '84, two prizes of fifteen and ten dollars respectively are offered to those members of the Sophomore and Freshman classes who show the greatest merit in declamation in a contest held during Commencement week.

HONORABLE MENTION.

The student having the highest general average in his class for the year, providing such average be at least 90 per cent., receives honorable mention at the annual Commencement, and the honor list is printed in the annual Catalogue.

SENIOR MEDALIST.

The member of the Senior class who graduates with the

highest general study average, receives the Faculty Gold Medal.

COMMISSIONED OFFICERS.

Upon graduation, cadet officers receive commissions signed by the President of the University and by the Adjutant and Inspector-General of the State.

CONDITIONS.

A student deficient in fifteen or more hours' work at the end of any year, is not ranked with the next class until such work is made up, and no condition is allowed to stand longer than one year. No cadet is eligible for a commencement honor who has not made up all deficiencies before the first Monday of the spring term of his Senior year. The operation of this rule may be suspended by vote of the Faculty in those rare cases which warrant such action.

PREPARATORY DEPARTMENT.

A preparatory department is maintained, to which students are admitted at any time during the year, and in which they are fitted for their college course in the briefest possible time. Students entering the college not fully prepared, may make up any conditions in this department.

ENDOWMENT.

The plan for increased endowment, which has been presented to the friends of the University, has met with a hearty reception, and a considerable amount has already been subscribed. With the rapid growth of the institution and the large increase in the number of students, new and greater demands are made upon her. To meet these demands a larger endow-

ment will be necessary, and it is earnestly hoped that the Alumni and friends of Norwich University will do their part toward assisting the institution.

NORTHFIELD, VT., June 27, 1889.

A business meeting of the Alumni and Past Cadets of Norwich University was called to order at 4:30 P. M., with President Joseph Stedman in the chair.

Prof. J. B. Johnson, of Northfield, was elected to receive subscriptions and donations toward a permanent endowment fund, the income to be used for the current expenses of Norwich University and support of the Faculty, and to be held by him in trust for that purpose only, excepting that, if the University cease to exist, then in trust for the donors.

Further, said Johnson to give good and sufficient bonds for the faithful execution of his trust in a sum not less than $5,000, and with at least two responsible sureties. The bond as drawn and signed to be approved by J. C. B. Thayer, Treasurer of Norwich University.

J. B. Johnson, N. L. Sheldon, D. E. Wilmarth, and R. L. Irish were appointed by the President to prosecute the business thus instituted.

All moneys and communications concerning endowment should be sent to the Trustee of the Fund, Prof. J. B. Johnson.

MILITARY FEATURE.

Throughout the history of the University there has been maintained a very high standard of Military excellence. From the first it has held the distinction of being the foremost Military institution in the land, with the exception of the National Academy. The following, from Gen. W. T. Sherman's speech before Ransom Post, St. Louis, Mo., will sustain the above statement regarding this University. In speaking of General T. E. G. Ransom, he says: "He became Principal of Norwich

University, THEN, as SINCE, an Academy of great renown. This military school at one time almost rivaled the National Academy of West Point, and there many a man who afterward became famous in the Mexican and Civil wars, first drank in the inspirations of patriotism and learned the lessons of the art of war." The reputation of the New England regiments must be attributed to discipline and instruction received at this institution, as much as to any other single factor; and the "Green Mountain Boys" owe their national reputation and success largely to their training within her halls. Her Honor Roll in the late Civil war contains the names of twelve Generals (among them Gens. Dodge, Buel, Seymour, Wright, Ransom): twenty-five Colonels, forty field officers, fifty-five Captains, one hundred and forty-three Lieutenants, and a long list of non-comissioned officers. It has been the highest endeavor of the Trustees and Faculty to maintain in every respect the Military reputation of the University. Attention to the course of Military Instruction will give a fair idea of the training given, and a copy of the Rules and Regulations will give a complete statement of the duties required of Cadets.

General Statement.

Norwich University is distinctively a military institution, but it is in no way reformatory in its nature.

The aim of the institution is to maintain a regular routine of military duty, which affords most valuable training to the young man engaged in study.

While strictly maintaining the military system, the student is allowed every liberty consistent with the system. It is only when wilful infractions of properly constituted authority occur, that the impersonal working of the military system exerts

STANDING, MILITARY CUSTOMS, ETC.

Academic standing depends upon recitations; Military standing upon marks of merit and demerit, together with proficiency in military duties. Immoralities, technical and minor offences, are marked with demerits, and are punishable in other ways. Wherever purely academic duties require variation in special matters, the analogies of Military usage are maintained, so far as practicable. The students are called cadets, and are under Military discipline. The cadet officers are appointed on the basis of Military and Academic standing. Every cadet is required to wear the Uniform of the University, when on duty.

UNIFORMS.

A single-breasted dress-coat of dark blue cloth, University buttons; trousers dark blue, with light red stripe; black cravat; standing collar; U. S. regulation helmet, with usual gilt ornament; forage cap; boots, or high shoes of black, unglazed leather. The commandant furnishes accurate directions for the tailor's use, if desired.

Sufficient time is given for students to wear out their citizen's suits, before they are required to procure uniforms.

LIBRARY AND COLLECTIONS.

The University library is very well supplied with works of reference, and in addition contains many works of great value, which are not to be found in newer libraries. Our mineral collection is small, but is growing rapidly. Manufacturers, dealers in building materials, and others are requested to send specimens of their products to the Department of Engineering. Specimens in Natural History, Minerals, etc., will be gladly received by the Superintendent. Alumni, Past Cadets, Authors, and Publishers are earnestly requested to contribute their publications to the University Library.

RECOGNITION BY STATE AND GENERAL GOVERNMENTS.

The fact that the State of Vermont has recognized Norwich University by making her Corps of Cadets a part of the State Militia and by granting her free scholarships, shows the extent to which the State government values the institution as a training school for the citizen soldier, and attests her gratitude for services already rendered. For like reasons the U. S. Government has detailed two of its active army officers for duty at the University, one as Professor of Military Science and the other as Signal Service Observer and Instructor in Military Signaling.

RESIDENT IN BARRACKS.

A member of the Faculty resides in the barracks with the cadets, thus insuring a strict observance of rules and regulations.

LOCATION.

Northfield being located on the main line of the Central Vermont railroad, is easy of access from all directions, and students are given half-fare rates upon application. Telegraphic communication can be had directly with the University barracks, through the Western Union Company. There is probably no State that can boast of a more healthful climate than Vermont. Northfield is in the central part of the State, and is ten miles from the Capital, Montpelier. A popular resort in summer, it loses none of its healthfulness in winter. The water is pure and clear, and the University and village are well suppli-

Routine of Duty.

Reveille, 6:30 A. M.; Police Call and Inspection of Quarters, 7 A. M.; Breakfast, 7:30 A. M.; Prayers, 8:45 A. M.; Study and Recitation hours from 9 A. M. until 12 M.; Dinner 12:15 P. M.

Afternoon Roll Call, 1:35 P. M.; Study and Recitation, from 1:45 P. M. until 3:45 P. M.; Drill, 4:10 P. M. until 5:10 P. M.; Supper, 5:30 P. M.; Retreat, 7:00 P. M.; Tattoo, 9:30 P. M.; Taps (Lights out), 10 P. M.

Retreat on Friday, Saturday and Sunday nights at the formation for supper. On Friday and Saturday nights there is no tattoo; roll call and taps at 10:30 P. M.

SUNDAYS.

Police Call, 7:30 A. M.; Breakfast, 7:50 A. M.; Sunday morning Inspection, 9:30 A. M.; Church, 10:30 A. M.; Dinner, 1:20 P. M.; Supper, 5:00 P. M.

On Friday nights there is release from quarters until 11 P. M. for Seniors, and until 10:30 P. M. for other Cadets.

On Saturday nights all Cadets are allowed to attend society meetings until 10:30 P. M. without permits.

Permits are granted to Cadets in good standing to go out for social purposes on Saturday or Sunday evening, as they may elect.

The foregoing routine is varied during the Spring Term and the Annual Encampment, as circumstances may render best.

The President with the concurrence of the Faculty periodically issues a detailed list of calls, and directs such additional roll-calls and makes such changes in the foregoing routine of duty as the discipline of the corps and changes in Academic and Military duty may necessitate.

Associate Alumni and Past Cadets.

By action of the Trustees, the Alumni and Past Cadets are entitled to elect one of the Board of Trustees each year. At a meeting held on Wednesday, June 26, 1889, it was decided that the meetings of the Association shall hereafter be held annually on the day preceding Commencement, at ten o'clock in the forenoon.

OFFICERS FOR 1891-92.

President:

N. L. Sheldon, '84, Boston, Mass.

Vice-Presidents:

Chas. H. Lewis, '55, Boston, Mass.
E. V. Booth, '87, (Deceased.)
C. F. Parker, '90, Woonsocket, R. I.
Charles Dole, '69, Northfield, Vt.
E. C. Houghton, '65, Bennington, Vt.

Secretary and Trustee of the Alumni Endowment Fund:

J. B. Johnson, '79, Northfield, Vt.

Treasurer:

L. B. Johnson, '88, Northfield, Vt.

Committee on Increasing the Alumni Endowment Fund:

N. L. Sheldon, '84, Norwood, Mass.
D. E. Wilmarth, '84, Boston, Mass.
R. L. Irish, '89, Laconia, N. H.

Members of the Association not present may vote by written ballot at the annual election of Trustees. It is therefore important that each Past Cadet keep the Secretary informed of his full address, and notify him promptly of any change.

New England Alumni Association.

ANNUAL REUNION IN BOSTON.

OFFICERS FOR 1892.

President:
John Q. A. McCollister, '56.

Vice-Presidents:
George W. Hobbs, '57.
William R. Cutter, '69.
Howard F. Hill, '68.
Dexter W. Lewis, '90.

Treasurer:
Daniel E. Wilmarth, '84.

Secretary:
N. L. Sheldon, '84.
(Address, Norwood, Mass.)

Ass't. Secretary:
G. D. Thomas, '76.

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Graduates of 1891.

Capt. George Franklin Abbott.
Civil Engineer, West End St. Ry., Boston.

Capt. Alfred Frederick Booth.
Assistant Principal, Northfield Graded School.

Capt. Edward Aikin Shuttleworth.
2nd Lieut. U. S. Army.

Lieut. William Hibbard Sprague.
With the Metropolitan Ins. Co., Boston.

Lieut. Harry Gordon Woodruff.
Teller 1st National Bank, Chelsea.

Lieut. Ethan Allen Shaw.
Instructor in Normal School, Randolph, Vt.

Lieut. Carl Gilman Dole.
Law Student, West Superior, Wis.

Lieut. Heber Calvin Cady.
Ass't Cashier Northfield Savings Bank.

Lieut. Burton Wiley Farnham.
Civil Engineer in City Engineer's office, Lowell, Mass.

Lieut. Fred Miner Goodhue.
Hydraulic Engineer, Dep't of Locks and Canals, Lowell, Mass.

Lieut. Percy Gates Smith.
Draftsman, Wells River.

Lieut. Clarence Bennett Riggs.
Civil Engineer, Black River, (Vt.) Railway.

New York Alumni Association.

ANNUAL REUNION IN NEW YORK CITY.

OFFICERS FOR 1892.

President:

Grenville M. Dodge, '53.

Vice-Presidents:

Cyrus H. Fay, '37.
Clayton E. Rich, '63.
William R. Mead, '64.
William R. Rumbaugh, '76.

Secretary and Treasurer:

George R. Miner, '83.
(Address, New York *Herald.*)

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Draftsman, Wells River.

Lieut. Clarence Bennett Riggs.
Civil Engineer, Black River, (Vt.) Railway.

Senior Gold Medalists.

1888.
LUTHER BURNHAM JOHNSON.
1889.
FRED E. LAMB.
1890.
HERMAN DRESSEL, JR.
1891.
ALFRED F. BOOTH.

Honorable Mention

WILLIAM H. SPRAGUE, '91.
EDMUND H. RYAN, '92.
DEWITT C. WEBB, '92.
EPHRAIM W. CLARK, '93.
LEROY C. HULBURD, '94.

Battalion Organization.

FREDERICK CLARK KIMBALL, 2nd Lieut. 5th U. S. Infantry, COMMANDANT.

ROBERT HENRY PERCE FORD, Cadet, 2nd Lieut. and Adjutant, GEORGE LESLIE ANDREWS, Cadet, Sergeant Major.

CADET COMPANIES.

"A"	"B"
Capt. Edward Henry Ryan.	Capt. DeWitt Clinton Webb.
1st Lieut. Charles Warren Pierce.	1st Lieut. Charles John Clement Evans.
2nd Lieut. Benjamin Whitney Gleason.	2nd Lieut. Robert Henry Perce Ford.
2nd Lieut. Ephraim Wesson Clark	2nd Lieut. Joseph Spafford Craigue.

Roster.

George Leslie Andrews.....Gouldsville.
Roy Davenport Baker.....North Adams, Mass.
Edward Cushman Bennett.....Bennington.
Clarence Henry Booth.....Northfield.
Lester Hazen Bradley.....Ilion, N. Y.
Charles Howard Brooks.....Northfield.
Will Granville Brooks.....Northfield.
Edgar Fletcher Carruthers.....Bellows Falls.
Ephraim Wesson Clark.....East Peacham.
Leo Bertram Clogston.....Fairhaven.
Joseph Spafford Craigue.....Amsden.
Charles Horace Davis.....Northfield.
Frederick Carnot Davis.....Northfield.
Frank James Donahue.....Proctor.
George Donnelly.....Bennington.
Charles John Clement Evans.....Northfield.
Robert Henry Ford.....St. Albans.
Eben Watson Gaynor.....Gouldsville.
Ernest Willard Gibson.....Londonderry.
Herman Arthur Gillette.....Huntington.
Benjamin Whitney Gleason.....Boston, Mass.
Frank Albert Gokey.....Northfield.
Pliny James Hamilton.....Northfield.
Harvey Levi Hinman.....North Stratford, N. H.
Philo Remington Hoefler.....Ilion, N. Y.
George Louis Harwood.....Bennington.
Frank Dudley Holbrook.....Newport.
Howard Clinton Holden.....Barre.
John Albert Holmes.....Haydenville, Mass.
Leroy Chittenden Hulburd.....Brasher Falls, N. Y.
Walter George Huntley.....Northfield.
Wilbur Edson Hurlburt.....Georgia.

Frank Alden Manuel.....North Troy.
Hiram Nathaniel Mattison.....Shaftsbury.
Sheridan David McAllister.....Warren.
George Soter Miller.....Lowell, Mass.
Charles Oscar Morrill.....Marshfield.
Harry Chester Mosely.....Northfield.
Edgar James Ogle.....North Stratford, N. H.
Owen Luther Pease.....Hartford.
Charles Warner Pierce.....Bennington.
Warren Alex. Pierce.....Bennington.
William Haselton Rollo.....St. Albans.
James Ernest Ross.....Ellendale, N. Dakota.
Clark Reynolds Rudd*.....Ilion, N. Y.
Edmund Henry Ryan.....Gouldsville.
Michael John Ryan.....Gouldsville.
Harry Creswell Schiffer.....New York, N. Y.
Thomas Silas Sinclair.....West Lebanon, N. H.
Herbert Livingston Sweet.....Alburgh.
Raymond Underwood Smith.....Wells River.
Almont Charles Stevens.....Gouldsville.
George Eber Storrs.....Island Pond.
Leon Ira Sweat.....Richford.
Arthur Lion Terrill.....Underhill.
Henry C. Town.....Jonesville.
Arthur Curtis Taber.....Vergennes.
George Armour Tracy.....Chelsea.
Harlan Badger Wason.....Methuen, Mass.
Dewitt Clinton Webb.....Braintree.
Elias Keyes Whitcomb.....Chicago, Ill.
George Dutt Whiteside.....Vergennes.
George Frederick Wright.....Springfield, Mass.
Hal Holmes Stearns.....Brasher Falls, N. Y.
S. Charles Yeaton.....Brooklyn, N. Y.



FALL TERM, 1892.

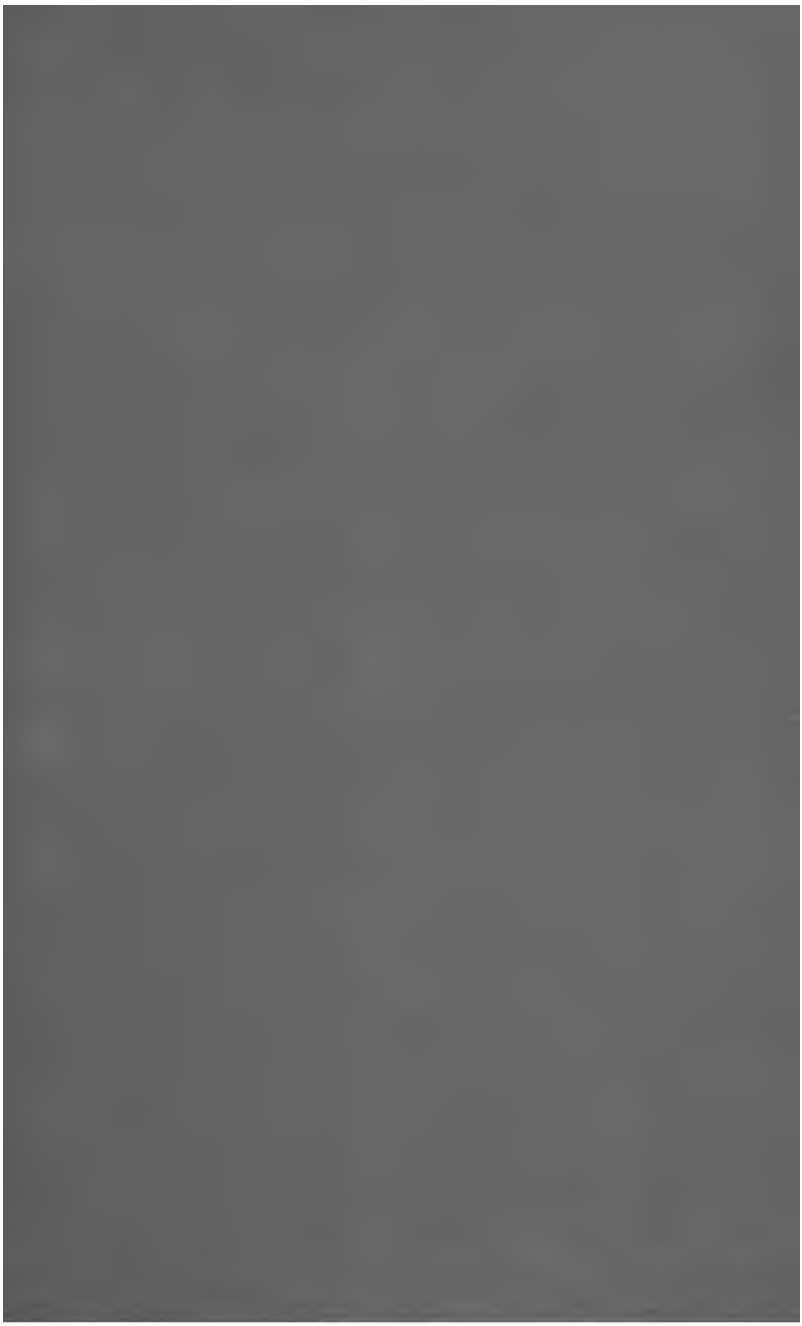
September 22, Thursday :—Entrance Examinations and Registration.
December 19–22 :—Term Examinations.
December 22, Thursday :—Term ends.

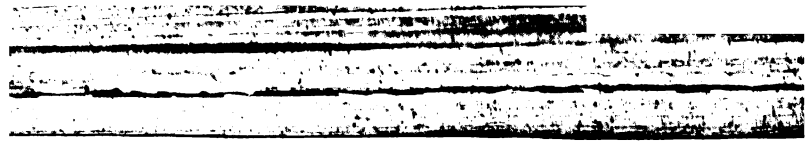
WINTER TERM, 1893.

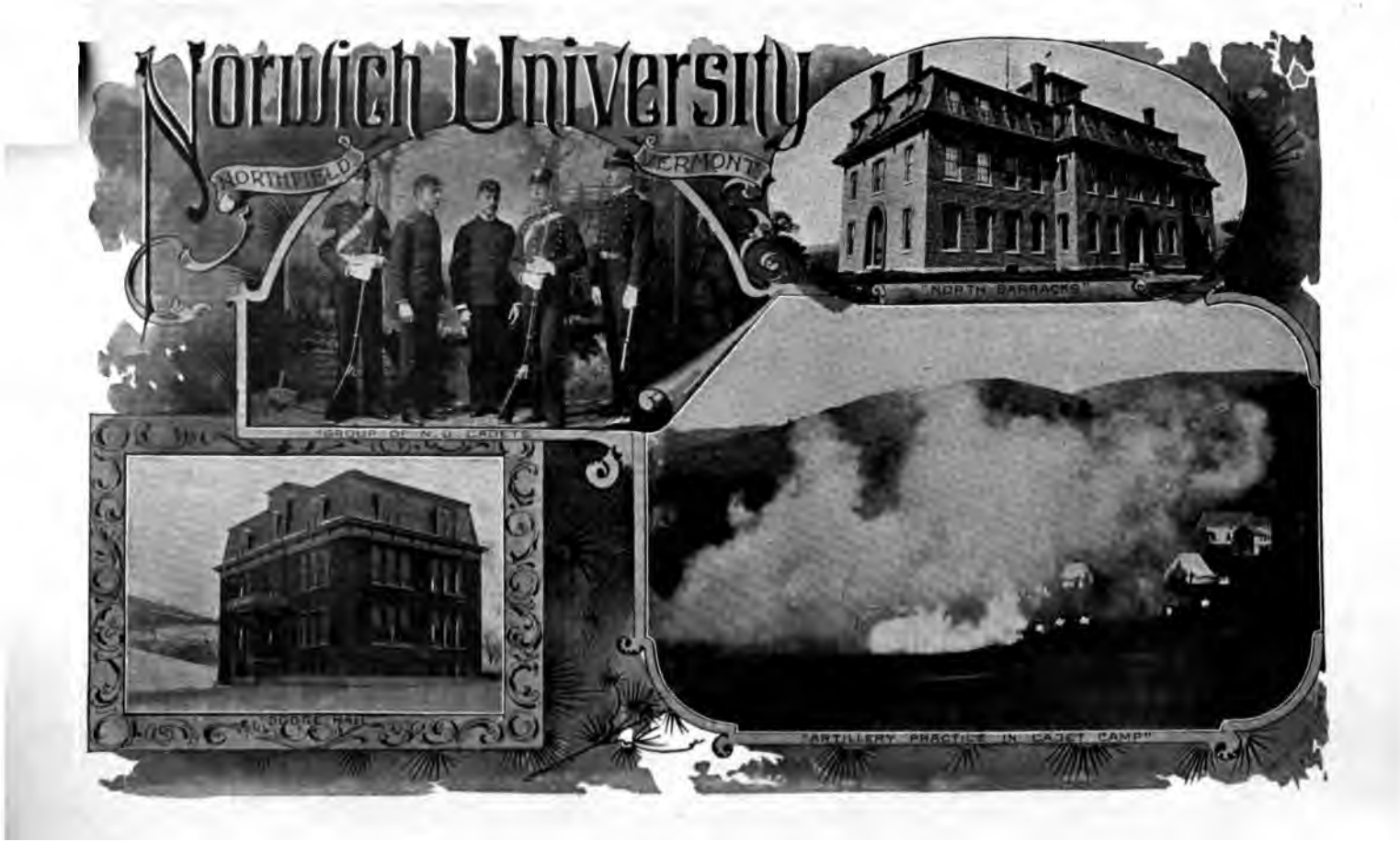
January 5, Thursday :—Entrance Examinations and Registration.
February 22, Wednesday :—Washington's Birthday.
March 20–23 :—Term Examinations.
March 23, Thursday :—Term ends.

SPRING TERM, 1893.

April 6, Thursday :—Entrance Examinations and Registration.
May 10, Wednesday :—Seniors will present graduation theses.
May 30, Tuesday :—Memorial Day.
June 1, Thursday :—Senior Examinations.
June 12–17 :—Final Examinations.
June 19 :—Annual Encampment begins.
June 25 :—Baccalaureate Sermon.
June 27, Tuesday :—Sheldon Prize Speaking.
June 28, Wednesday :—Annual meeting of Trustees. Alumni Exercises.
June 29, Thursday :—Annual Commencement.
June 30, Friday :—Entrance Examinations.






Norwich University
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FIFTY-NINTH ANNUAL CATALOGUE

— OF —

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N. LOUIS SHELDON, A. M.,	elected by Alumni, term expires 1895,	Norwood, Mass.
GEORGE D. THOMAS, Ph. B.,	" " 1896,	Waltham, Mass.
JOHN R. MOORE, B. S.,	" " 1893,	Elizabeth, N. J.
CHARLES DOLE, A. M.,	" " 1894,	Northfield.
ETHAN A. SHAW, C. E.,	" " 1897,	Randolph.

Faculty.

HON. GEORGE NICHOLS, M. D., LL. D.,
ACTING PRESIDENT.

CHARLES C. BRILL, A. M.,
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JOHN B. JOHNSON, A. M., C. E.,
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CHARLES C. BRILL, A. M.,
Professor of Chemistry and Physics.

FREDERICK C. KIMBALL, 2nd Lieut. 5th Inft., U. S. A.,
Professor of Military Science.

EDSON L. WHITNEY, Ph. D., LL. B.,
Professor of History and Modern Languages.

HERBERT R. ROBERTS, A. B.,
Professor of Latin, Greek and English.

ASA HOWE, A. M., C. E.,
Professor of Engineering Field Work.

FRANK PLUMLEY, LL. B.,
Lecturer on Constitutional and Commercial Law, and Social Science.

WILLIAM LINE, Observer U. S. Weather Bureau,
Instructor in Meteorology and Military Signaling.

WALTER G. HUNTLEY,
Assistant in Chemical Laboratory.

HARLAN B. WASON,

JOHN B. JOHNSON, Captain N. G. V.,

QUARTERMASTER.

WILLIAM B. MAYO,

SURGEON.

REV. HOMER WHITE,

CHAPLAIN.

JAMES EVANS,

ARMORER.

Requirements for Admission.

All candidates for admission to the University must be at least fifteen years of age, and must present satisfactory evidence of good moral character.

TO THE COURSES IN CIVIL ENGINEERING, CHEMISTRY, AND SCIENCE AND LITERATURE.

Candidates are examined in the following studies:—

MATHEMATICS.—Arithmetic; Algebra to Quadratics; Geometry; First four books, Davies' Legendre or an equivalent.

ENGLISH LANGUAGE.—Grammar; Composition, with special attention to punctuation and the use of capitals.

GEOGRAPHY.—Physical and Political Geography.

HISTORY.—History of the United States.

TO THE COURSE IN ARTS.

In addition to the examination in Mathematics, English Language, Geography and History, laid down for the courses in Science, examinations are as follows:—

LATIN.—Cæsar's "Commentaries," four books, or Sallust's "Catiline"; Virgil's "Æneid," six books; Cicero, four orations.

GREEK.—Xenophon's "Anabasis," four books, or one hundred pages Goodwin's Greek Reader; Homer's "Iliad," two books.

Graduates from approved High Schools are admitted upon certificates.

Candidates not fully prepared in all the requirements, may be conditioned for one term.

ADVANCED STANDING.

Candidates for advanced standing must pass satisfactory examinations in the studies already completed by the class which they propose to enter, and in those required for admission. Those, however, from other colleges, should bring certificates of honorable dismissal, and marks showing standing. The latter may, on approval by the Faculty, be taken in lieu of examinations.

Courses of Instruction.

COURSE IN MILITARY INSTRUCTION.

For all Students throughout the four years. Exercises, Drills or Lectures every day at 4 o'clock, P. M.

FALL TERM.

Settings Up, Calls, Manual of Arms, School of the Company and Extended Order Drill; Bayonet Exercises indoors in bad weather.

WINTER TERM.

Broadsword and Sabre Drill, Manual of the Sword, and Fencing. Juniors and Seniors, Lectures on Military Engineering or Military Science and Art of War.

SPRING TERM.

Artillery Drill, Rifle Practice, Battalion Drill, Ceremonies, Signaling, Lectures on Customs of the Service, Camping, and Practice Marches.

The Cadets are at all times under military discipline, and strict observance of military customs is required.

Cadets are detailed as Adjutant, Officer of the Day, Guard, etc., in their turn, and are instructed in making out the different kinds of military reports; and are trained in the duties incident to field or garrison.

Military duties and exercises are so arranged as not to occupy the time that would otherwise be devoted to study. They are attended to at those hours which are generally passed by students in idleness, or devoted to useless amusements, for which they are made a pleasant, healthful and profitable substitute. They develop that bearing and those manly arts which always distinguish the soldier, while affording excellent physical training.

Military training prepares a young man's body, as discipline prepares his mind, to meet, with dignity and coolness, the emergencies sure to arise in his life, whatever his profession may be, and in moments of excitement or danger gives him that firmness and self-control that characterize the gentleman.

Norwich University numbers among its graduates many names which stood high in the profession of arms during the war with Mexico and the War of the Rebellion, and at the present time many of her graduates are serving with distinction as Officers of the National Guard and of the Regular Army of the United States.

Examinations are held in tactics, orders, duties and customs of military service, to insure familiarity with them.

Courses of Study.

Four regular courses have been established, as follows:—

I. A course in Civil Engineering.
II. A course in Chemistry.
III. A course in Science and Literature.
IV. A course in Arts.

The courses in Civil Engineering and Chemistry have a distinctly practical bearing, and give a thorough training for the technical professions.

The course in Science and Literature is intended for such as may not wish to pursue a full course in Mathematics, or one for a distinctly scientific profession, and is designed to furnish a liberal preparation for the professions.

Each of these courses extends through four years, and is intended to give the student a liberal culture.

Changes are made in the course in Chemistry to meet the wants of students preparing for Medicine and Pharmacy.

Courses in Science.

FRESHMAN YEAR.

FOR ALL COURSES EXCEPT THE COURSE IN ARTS.

NOTE.—The figures after each subject indicate the number of recitations per week, or its equivalent.

FALL TERM.—Algebra, 5; French or German, or Latin, 5; Inorganic Chemistry, 5, (text, 3; laboratory, 2); Rhetoric, 2; Free Hand Drawing, 6; English, 1.

WINTER TERM.—Geometry, 5; French or German, or Latin, 5; Inorganic Chemistry, 5, (text, 3; laboratory, 2); Rhetoric, 2; Lettering, 3; Tinting and shading, 3; English, 1.

SPRING TERM.—Trigonometry, 5; French or German, or Latin, 5; Inorganic Chemistry, 5, (text, 3; laboratory, 2); Rhetoric, 2; Mechanical Drawing, 6; English, 1.

I. THE COURSE IN CIVIL ENGINEERING.

Leading to the Degree of Bachelor of Science in Civil Engineering.

SOPHOMORE YEAR.

FALL TERM.—Analytical Geometry, 5; German or French, 5; Mechanics and Heat, 5; Descriptive Geometry, 3; Descriptive Drafting, 6; English, 1.

WINTER TERM.—Differential Calculus, 5; German or French, 5; Electricity and Magnetism, 5; Descriptive Geometry, 3; Shades and Shadows, Linear Perspective, and Isometrical Projection, 6; English, 1.

SPRING TERM.—Integral Calculus, 3; Land Surveying, Leveling, and Field Work, Use and Adjustments of Compass, Transit, and Level, 6; (text, 2; field work, 4;) German or French, 5; Acoustics and Optics, 5; Detail Drawing, Trac-

JUNIOR YEAR.

FALL TERM.—Mechanics of Engineering—Statics and Dynamics, 5; Geology, 5; Colored Topography, Pen Topography, and Plotting of Surveys, 6; Advanced Surveying—Topographical, Municipal, and Geodetic (Use of stadia and plane table), 6; (text, 2; field work, 4); English, 1.

WINTER TERM.—Mechanics of Engineering—Materials, 5; Blow-pipe Analysis and Determinative Mineralogy, 4; Qualitative Analysis, 6; Theory of Trusses and Arches, 3; Graphics of Trusses and Arches, 6; English, 1.

SPRING TERM.—Bridge Stresses, 3; Stone Cutting, 2; Meteorology, 2; Mechanics of Engineering—Hydraulics, Retaining Walls, Masonry Dams, 3; Botany, 3; Drawing—Bridge Stresses, 4; Stone Cutting, 2; English, 1.

SENIOR YEAR.

FALL TERM.—Commercial Law, 5; Metallurgy, 2; Bridge Designing (lectures), 2; Railroad Engineering (curves, turnouts, and practical location of railway), 6; (text, 2; field work, 4;) Drawing.—Design of Bridges, 6; English, 1.

WINTER TERM.—Constitutional or International Law, 5; Hydraulic and Sanitary Engineering, 3; Civil Engineering—Materials of Engineering, Foundations, Canals, Highways, 5; Design of Engineering Structures, 6; English, 1.

SPRING TERM.—Spherical Astronomy.—Determination of Time, Latitude, etc., 3; Contracts and Specifications, 2; Political Economy, 5; Hydrographic Surveying (text, and field work), 2; Railroad Engineering, 3; Preparation of Thesis, 5.

II. COURSE IN CHEMISTRY.

Leading to the Degree of Bachelor of Science in Chemistry.

SOPHOMORE YEAR.

FALL TERM.—Chemical Technics, 5; French or German, or Latin, 5; Mechanics and Heat, 5; Qualitative Analysis, 10; English, 1.

WINTER TERM.—French or German, or Latin, 5; Electricity and Magnetism, 5; Blow-pipe Analysis, 10; Qualitative Analysis, 10; English, 1.

SPRING TERM.—French or German, or Latin, 5; Accoustics and Optics, 5; Qualitative Analysis, 15; Land Surveying, 6; (text, 2, field work, 4); English, 1.

JUNIOR YEAR.

FALL TERM.—Ancient History, 3; Geology, 5; Organic Chemistry, 2; Gravimetric Analysis, 15; Zoölogy, 3; English Literature, 2; English, 1.

WINTER TERM.—Organic Chemistry, 2; Gravimetric Analysis, 15; English Literature, 2; English, 1.

SPRING TERM.—English Literature, 2; Organic Chemistry, 2; Volumetric Analysis, 15; Botany, 3; English, 1.

SENIOR YEAR.

FALL TERM.—Commercial Law, 5; Metallurgy, 2; Toxicology, 10; Medical Chemistry, 5; Psychology, 5; English, 1.

WINTER TERM.—Constitutional or International Law, 5; Water Analysis, 10; Agricultural Chemistry, 10; Logic, 5; English, 1.

SPRING TERM.—Political Economy, 5; Gas Analysis, 10; Thesis, 5; Assaying, 4.

III. COURSE IN SCIENCE AND LITERATURE.

Leading to the Degree of Bachelor of Science.

SOPHOMORE YEAR.

FALL TERM.—Analytical Geometry, 5; French or German, or Latin, 5; Mechanics and Heat, 5; Ancient History, 3; English Literature, 2; English, 1.

WINTER TERM.—French or German, or Latin, 5; Electricity and Magnetism, 5; Calculus, 5; Medieval History, 3; English Literature, 2; English, 1.

SPRING TERM.—French or German, or Latin, 5; Acoustics and Optics, 5; Analytical Chemistry, 10; Land Surveying, 6; English Literature, 2; Modern History, 3; English, 1.

JUNIOR YEAR.

FALL TERM.—French or German, or Latin, 5; Geology, 5; Zoölogy, 3; English History, 5; English Literature, 2; English, 1.

WINTER TERM.—French or German, or Latin, 5; Analytical Chemistry, 10; Blowpipe Analysis, 4; English Literature, 2; Colonial History, 5; English, 1.

SPRING TERM.—French or German, or Latin, 5; English Literature, 2; U. S. History, 5; Botany, 3; Meteorology, 2; English, 1.

SENIOR YEAR.

FALL TERM.—French or German, or Latin, 5; Commercial Law, 5; Metallurgy, 2; Psychology, 5; English, 1.

WINTER TERM.—French or German, or Latin, 5; International Law, 5; Constitutional Law, 5; Logic, 5; English, 1.

SPRING TERM.—French or German, or Latin, 5; Political Economy, 5; Astronomy, 3; Ethics, 3; Thesis, 5.

IV. COURSE IN ARTS.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

FALL TERM.—Algebra, 5; Memorabilia and Greek Prose, 5; Livy and Latin Prose, 5; Rhetoric, 2; Free Hand Drawing, 6; English, 1.

WINTER TERM.—Geometry, 5; Herodotus, 5; Horace—Odes and Epodes, 5; Rhetoric, 2; Tinting and Shading, 3; Lettering, 3; English, 1.

SPRING TERM.—Trigonometry, 5; Homer's Odyssey, 5; Horace—Satires and Epistles, 5; Rhetoric, 2; Mechanical Drawing, 6: English, 1.

SOPHOMORE YEAR.

FALL TERM.—Sophocles, 3; Juvenal's Satires, 3; Mechanics and Heat, 5; Ancient History, 3; English Literature, 2; English, 1.

WINTER TERM.—Demosthenes, 3; Tacitus, 3; Electricity and Magnetism, 5; English Literature, 2; Medieval History, 3; English, 1.

SPRING TERM.—Æschylus, 3; Cicero's Select Letters, 3; Acoustics and Optics, 5; English Literature, 2; Modern History, 3; English, 1.

JUNIOR YEAR.

FALL TERM.—Demosthenes, 2; Pliny, 2, Geology, 5; French or German, 5; Inorganic Chemistry, 5; English Literature, 2; English, 1.

WINTER TERM.—Plato, 2; Plautus, 2; Inorganic Chemistry, 5; French or German, 5; English Literature, 2; Colonial History, 5; English, 1.

SPRING TERM.—Greek Syntax, 2; Latin Syntax, 3; French or German, 5; Inorganic Chemistry, 5; English Literature, 2; U. S. History, 5; English, 1.

SENIOR YEAR.

FALL TERM.—Analytical Chemistry, 10; French or German, 5; Commercial Law, 5; Psychology, 5; English, 1.

WINTER TERM.—French or German, 5; International Law, 5; Constitutional Law, 5; Logic, 5; English, 1.

SPRING TERM.—French or German, 5; Political Economy, 5; Thesis, 5; Astronomy, 3; Ethics, 3.

Military instruction throughout all courses the same as laid down in the Military Course.

Text Books and Books of Reference.

Mathematics.—Astronomy, Young. Algebra, Wells' University. Analytical Geometry, Loomis. Calculus, Taylor. Geometry, Davies' Legendre. Mechanics, Church. Trigonometry, Davies. Descriptive Geometry, Church.

Engineering.—Land Surveying, Hodgman. Advanced Surveying, Johnson. R. R. Surveying, Searles. Bridge Stresses, Merriman. Civil Engineering, Mahan and Trautwine. Specifications, Haupt. Hydraulic Engineering, Fanning. Sanitary Engineering, Philbrick. Stereotomy, Mahan. Dubois' Stresses in Framed Structures. Wellington's Earthwork Computations.

Sciences.—Botany, Gray's School and Field Book. Chemistry, Analysis, Qualitative, Elliott, Fresenius. Volumetric Analysis, Sutton. Analysis, Quantitative, Fresenius. Organic Industrial Chemistry, Sadtler. Blow-pipe, Plattner's Qualitative and Quantitative, by Cornwall. Metallurgy and Assaying, Hiorn's Text-Book of Elementary Metallurgy, Hiorn's Practical Metallurgy and Assaying. Agricultural Chemical Analysis, Frankland. Medical Chemistry, Ralfe's Clinical Chemistry. Organic, Remsen. Physics, Gage's Elementary, with lectures on special subjects. Zoology, Packard. Geology, Winchell's Geological Studies. Mineralogy, Dana's Manual, and Foye's Tables. Food Adulteration and its Detection, Battershall.

History, Political Science, and Law.—History: Greek, Smith; Roman, Merivale; Mediæval and Modern, Myers; English, Green. Political Economy, Macvane. Pschyology, Baldwin. Logic, Jevons. Ethics, Robinson. International Law, Woolsey. Constitutional Law, Cooley. Commercial Law, Townsend. Thwaites' The Colonies, Johnston's American Politics.

MODERN LANGUAGES.—French: Edgren's French Grammar; Super's French Reader; French Literature. German: Joynes-Meissner's German Grammar; Joynes' German Reader; German Literature.

ENGLISH.—Rhetoric: Clark's Practical Rhetoric; Genung's Practical Rhetoric. Elocution: Clark's Notes on Reading; Bacon's Manual of Gesture. English Literature, Welsh.

DEGREES.

The candidate for any degree must deposit with the Faculty a satisfactory thesis on some scientific or literary subject connected with his department.

DEGREES ON GRADUATION.

The degree of Bachelor of Science in Civil Engineering is conferred upon any student who has completed the course in Civil Engineering.

The degree of Bachelor of Science is conferred upon any student who has completed the course in Science and Literature.

The degree of Bachelor of Science in Chemistry is conferred upon any student who has completed the course in Chemistry.

The degree of Bachelor of Arts is conferred upon any student who has completed the course in Arts.

ADVANCED DEGREES.

The Master's degree in Science or Arts is conferred upon graduates of this University of three years' standing who have taken the corresponding Bachelor's degree, and who, during that time, have been engaged in professional, literary, or scientific pursuits, or have pursued a course marked out by the Faculty, for two years after graduation, and have passed the examinations.

The degree of Civil Engineer is conferred upon graduates in Civil Engineering of three years' standing, who have pursued the profession of engineering during that time, have passed the requisite examinations, and have presented a satisfactory thesis; or upon graduates who have completed a post-graduate course.

Subjects and Methods of Instruction.

ENGINEERING.

The work of the first year in this department is common to all courses. The thorough training of the eye and hand in Freehand Drawing is of the greatest importance in all subsequent drafting. The course embraces accurate outline drawing, elementary perspective, sketching, object drawing, pencil shading and designing. The effort is made to produce designers, instead of mere copyists. Practice in lettering large and small drawings, general orders, etc., also in tinting and shading with the right line pen, and with brush and water colors, is given in the second term. Neatness of text, and rapidity of execution are aimed at. In the third term, dexterity in handling drafting instruments is acquired. Various applications of geometry to drafting, and the orthographic and isometric projections of joints and splices in wood construction are taught. Descriptive Geometry is taught in the fourth and fifth terms, with special reference to its applications to shades and shadows, machine construction, stone cutting, and to the design of stone bridges, culverts, spiral stairways, sewer intersections, etc.

The course in bridges begins with the drawing of details, which are measured by students while visiting engineering structures. Thus, while the student acquires facility in drawing, he becomes familiar with the various details of a bridge. An extended course in Bridge Stresses is given in

the ninth term, and in the tenth term the student is given specifications, and required to apply his theoretical knowledge in designing railway and highway bridges of wood, iron and steel, to the minutest details. In Pen Topography and Colored Topography the students use the conventions for map making, and apply them in the maps platted from the land and railroad surveys.

An extended course in Applied Mathematics, or Mechanics of Engineering is given, in which engineering problems concerning rigid bodies at rest or in motion, the strength of engineering materials, and the statics and dynamics of liquids and gases, are practically treated.

The laboratory work of the eighth term and the Metallurgy of the tenth enable the student to study the materials of engineering with regard to strength and constituents. Under Hydraulic, Sanitary, and Civil Engineering, the design and construction of water supply and distribution systems, sewerage systems and sewage disposal, and of canals, tunnels, foundations in water and on land, and river and harbor improvements, are treated.

Six hours of drafting per week are required throughout the course, and while the above subjects are being studied, numerous designs of engineering structures are made in the drafting room. In the Reading Room are placed the best of engineering periodicals, which give descriptions of all new works of special interest, and enable the student to keep up with the latest methods of construction.

In Land Surveying and Leveling, practice in using and adjusting instruments is given, and the most approved methods of map making, dividing up and parting off land, and supplying omissions in old surveys are taught both in class-room and field. The advanced surveying of the seventh term includes Topographical, Geodetic, and City Surveying, with field work and practice in the drawing room.

The Hydrography of the last term consists of lectures, reci-

tations, and practice on neighboring bodies of water. In Railroad Surveying the field work consists of preliminary surveying, final location, slope staking, etc. Office work is given in making contour maps of the line, profiles, earthwork calculations, estimates of cost, etc. The lectures on Economic Railway Location enable the students to decide between two or more proposed railway lines, and to reduce expenditures in the operation of lines already built.

In the last term students are required to make specifications and contracts for engineering projects of their own design. The course given in this term in Astronomy provides the engineer with as much of this subject as his profession requires.

EQUIPMENT.—The department has a collection of designs for Freehand and Perspective Drawing, and for modern houses, cottages, public buildings, and architectural details. It has also collections of blue prints of the best modern bridges, including pivot draws, plate girders, and various types of pin-connected and riveted trusses, and blue prints of sewer details and sewer constructions It has a collection of models of wooden splices and joints used in bridge construction and carpentry, and of details of machine construction.

The department has procured the best modern instruments for angle and line measurement, including transits, compasses, levels, plane table, sextant, rods, chains, etc., and is prepared to give as much of practical engineering field work as can be given in schools, with the first-class instruments now used in modern engineering.

Special acknowledgment is due for the following gifts to the department since September, 1892:

Col. E. M. Carr, engineer's chain; leveling rod; full set of stadia and cross-section rods.

MATHEMATICS.

In the department of Mathematics, sufficient attention is

paid to practical applications to enable students to see the utility of their studies, and to assist them in the scientific professions.

Theory is developed in as careful and complete a manner as possible, in order that the student may receive that mind discipline which is so valuable an equipment for all pursuits, whether technical or general.

The clearest and most concise text-books are sought for; abstruse and unprofitable discussions are avoided; original work is encouraged, and students are called on for personal recitations more frequently than in most institutions of similar character.

GEOLOGY AND MINERALOGY.

The treatment of Geology consists of text-book work, supplemented by frequent excursions in the field, in which the many interesting features of the region are examined. Colored maps, representing the geological formations of counties or larger sections, are required. Mineralogy is taken up in connection with Geology, the student being required to identify minerals by their physical properties. In connection with this work, each student is required to make a collection of fifty minerals, which he determines and classifies. To aid him in this work he is given instruction in Blow-pipe Analysis and Determinative Mineralogy. Through the generosity of the late Philander D. Bradford, the University has acquired a valuable collection of minerals.

HISTORY AND POLITICAL SCIENCE.

The course in History affords a connected and comprehensive view of the history of civilization from the earliest times to the present. By investigating the causes which underlie the world's history, the instruction aims, not only to train the memory and develop the reasoning faculties, but to fit men to deal wisely with those practical social questions of the present,

upon whose solution the experience of the past throws the most valuable light. Particular attention is given to the constitutional development of England and of the United States.

Political Economy is taught in the Senior year by means of text-books, lectures, and informal discussions. A theoretical view of the subject is followed by a practical study of Land and Labor Questions, Socialism, Finance, Public Credit, the Principles of Taxation, and Tariffs.

PSYCHOLOGY.

An examination of the different sources of knowledge, an analysis of the various mental states, and a classification of the faculties, are followed by a study of the relation of psychology to education, for the benefit of those students who may desire to engage in teaching. The laws governing the processes of acquiring and reproducing knowledge, the development of the faculties, together with the ways in which they interact one on another, and the play of motives, furnish the foundation of rational instruction and government, and are of special value to the teacher.

LOGIC.

Logic is taught by recitations and informal lectures. The objects of this study are to give the student vigorous mental discipline, training in exactness, and certainty in thinking, skill in detecting fallacy, and assistance in all the sciences by directing attention upon those points of method in each science, which the cultivator is apt to neglect in his zeal for the subject-matter of each.

The unfolding of the laws of thought by an analysis of the Notion, Judgment and Reason, is made the basis of many exercises in the opposition and conversion of propositions, logical division, definition, classification, analysis, synthesis, application of the rules of the syllogism to arguments, and the detection of fallacies. In Induction, the methods of scientific

investigation and proof are considered in connection with a study of the history of some one of the natural sciences.

MODERN LANGUAGES.

The chief aim of this department is to enable the student to read French and German with ease and fluency. By this method it is intended, not only to familiarize the ear with the spoken language, and thus to lay the best groundwork for conversation, but also to render easy and intelligible the grammar work and reading which follow.

After a thorough course in the essentials of grammar, accompanied with composition and the reading of easy prose, are read various selections of prose and poetry from the best authors.

Much attention is given to the relation of the languages to English and to each other, especially in the matter of derivative and cognate words.

To enrich the student's English vocabulary, to cultivate his taste for good literature, and to broaden his mental horizon, are further objects of the instruction.

RHETORIC, ENGLISH CRITICISM, AND ELOCUTION.

The instruction in this department aims to deal in the most practical way with the composition and delivery of good English. The work, which is uniform in all courses, is continuous throughout the four years.

In Rhetoric, to which subject is devoted two hours each week during the Freshman year, much of the time is spent in the application of the principles of Rhetoric to the correction of faulty sentences. This instruction is supplemented, during the remainder of the course, by lectures on the higher qualities of style, in connection with the essay work. As to punc- [illegible]ragraphing, etc., students are required to present [illegible]ations in proper form for publi-

In English Criticism, while it is sought to eradicate faults of style, especial attention is given to the development of the student's individuality and power of expression. An important feature is the critical examination of English prose masterpieces, which is made in connection with the study of English Literature. Essays and orations are carefully revised, returned to the writers for correction, and afterward read and criticised in class. That the student may learn to study his subject comprehensively, and to arrange its parts logically, instruction is given in the formation of essay outlines.

In Elocution, the chief ends sought are distinct and forcible utterance, just emphasis, and ease and naturalness of expression.

RHETORICALS.

Friday afternoon of each week is devoted by the entire corps of cadets to rhetorical exercises, in which each cadet is required to take part every third week. The exercises are varied, consisting of declamations, essays, orations, debates, presentation and acceptance speeches, etc. Much stress is laid upon the subject of extempore speaking. Each cadet is required to rehearse before a member of the faculty before appearing at rhetoricals. At the close of each rhetorical session, the members of the faculty make criticisms and suggestions upon the work done. Occasionally, in place of the regular rhetorical work, the corps organizes itself into a senate or other deliberative body, to gain familiarity with parliamentary law.

Experience has shown that four years of participation in these exercises insures, even to the diffident, that ease and fluency in public speaking which is so important a factor in the various walks of life.

BOTANY.

The course in Botany begins in the spring term of the

Junior year, and comprises Vegetable Morphology and Physiology, Plant Analysis, and the preparation of Herbaria.

The life history of vegetation is traced from seed through stems and roots, leaves, branches, buds, flowers and fruit, to seed again.

Gray's Lessons are used, with lectures and field-work. The fall term is devoted mainly to Classification and Histology. A few of the more difficult orders of Phænogams are studied. Attention is given to the various kinds of parasitic fungi so destructive to crops.

ZOOLOGY.

Structural Zoölogy is taught by recitations and by laboratory demonstrations. Dissections and drawings are made of representative species in each group of animals. The purpose of this course is to give the student a definite conception by means of sense-images of the characteristic structure of the leading modifications of the Animal Kingdom.

PHYSICS.

The treatment of Physics consists of text-book work, with frequent experiments. The work in Mechanics is still further treated under a separate head. Especial attention is given to Electricity and Magnetism, and the student is required to do actual work in wiring, etc., making computation of resistance in telegraph and electric light wires. He is also taught the principles of various electrical machines, and is encouraged to make models. The class is taken to visit electric plants, where the principles taught in the class room are practically applied.

CLASSICS.

It is the aim of the Classical Department to make the work as thorough as possible, and to give the student a general literary culture. A thorough knowledge of grammatical forms

is considered necessary, and especial attention is given during the first year to etymology and syntax, vocabulary and idioms. In this manner not only a thorough knowledge of the language is obtained, but the greatest possible amount of mental discipline is derived. The similarity between the Greek and Latin on the one hand and the English on the other is pointed out, and especial study is given to roots from which English words are derived. The course is designed to embrace all the leading classes of composition in Greek and Roman literature, and to afford accurate historical knowledge of the Greek and Latin characters and customs. Attention is given to right translation, and care is taken that the student translates into good English, that he may thus improve his knowledge of English in the study of the Classics.

CHEMISTRY.

The study of Chemistry is begun by students in all courses, except that of Arts, in the Freshman year. It consists during this year of lectures and recitations upon general Inorganic Chemistry, in which the principles of the science are brought out and fully explained. Following this is a description of the properties of elements and compounds, and of the methods used for preparing them. To bring this work more clearly before the student a large number of experiments are performed before the class, in many of which the students are permitted to assist.

In addition to the recitations, two hours a week are devoted to laboratory practice, in which the student performs for himself the experiments given in the section room. The second year's work is intended for those who take the Chemical Course, and consists of daily laboratory practice, together with recitations and lectures upon Chemical Technics. The work of this and of the following years is performed by the students themselves, under the direction of the professor and

his assistant. Qualitative examinations of minerals, commercial products, fertilizers, drugs and medicines, are made, and as the student becomes more advanced, quantitative examinations of the same substances are made. For those students desiring to fit themselves for the study of Medicine and Pharmacy, special instruction is provided in the Chemical Laboratory.

FINALLY.

It is the aim in all of the departments of the University to teach students the practical application of what they study. Mere theories are of little value unless the student can apply them successfully. Too many college graduates have failed in their professions from being unable to apply theory to practice, and it is this lack which we endeavor to supply in our students.

Brief Sketch of Norwich University.

This institution was founded in 1819, by Capt. Alden Partridge, of whom a cut appears in this Catalogue, and was known as the American Literary, Scientific, and Military Academy. It retained the name until November 6, 1834, when a charter of incorporation was granted it by the State of Vermont, under the name of Norwich University.

Thus was founded the FIRST Scientific, Classical, and Military College in the United States. This new departure met with universal favor, and its halls were soon crowded with young men from every State in the Union.

In March, 1866, the University buildings at Norwich were destroyed by fire, and the University was removed to Northfield, Vt., where the citizens had offered fine grounds and

commodious barracks. Here the same system of instruction and military discipline is maintained, and many young men have been enabled to go forth to fill high positions in various professions.

This was the first institution in the country to lay down a purely scientific course of study, and up to the time of the Rebellion the only one which embraced in its curriculum thorough Military, Classical, and Scientific courses. By her work for half a century, Norwich University merits the confidence of the public. Special attention having been given to Military Science and Engineering, her graduates have become particularly distinguished as army officers and civil engineers, some having risen to the foremost rank.

Scholarships.

Thirty State scholarships, covering tuition in any of the departments, are now available.

Young men residing in Vermont who may be desirous of obtaining a State scholarship should first apply to the Superintendent of the University for information as to whether a vacancy in their county exists. Learning of a vacancy, application should then be made to the Senators of the applicant's county.

In addition to the above there have been created twelve half-scholarships by the benevolent friends of the University.

Young men desiring to take advantage of the scholarships hereby offered should address the Superintendent at Northfield.

General Information.

EXPENSES.

A prominent feature of the University is the very reasonable charges for instruction and the low expense of living. The charge is $85 per year, for instruction, room rent and incidentals. Students pay for board and laundry at the University Mess Hall $3.25 per week, which makes the whole expense less than the living expenses alone in cities, and at other institutions of learning.

The following table gives a statement of the expenses:—

Tuition per College Year	$65.00
Room rent	15.00
Library and Contingent Expenses	5.00
Board and Laundry, thirty-six weeks	117.00
Total for year	$202.00

Uniform complete, including Regulation Fatigue Suit and Dress Coat, Helmet and Fatigue Cap, $40.00.

The charge for room rent is based upon the supposition that two students occupy the same room. Rooms are unfurnished. Students bring bed linen, blankets and towels. Second hand furniture can be bought at low prices, and sold at a slight reduction.

A room can be furnished at a cost of from $10 upwards to each occupant.

Cadets who are appointed buglers receive $50 per year for their services.

Bills are payable strictly in advance.

Students in the course in Chemistry are required to deposit $10 at the beginning of each term of the Sophomore year, and

$15 at the beginning of each term of the Junior and Senior years, the amount not consumed being returned at the end of each term.

In the Engineering course in Qualitative Analysis, $3 is charged for chemicals in the second term of the Junior year. In the other courses a fee of $5 per term is charged for Qualitative Analysis, and $3 per term for Blow-pipe Analysis.

One dollar per term is charged members of the Freshman class taking the laboratory work in connection with Inorganic Chemistry, for chemicals.

These charges are for chemicals, and do not include breakages or waste of materials. The average expense for materials to students in the Chemical course is from $6 to $8 per term.

The Wells River railroad allows students half fare, and the Central Vermont carries students for two cents per mile on certificates, to be obtained through the Superintendent of the University.

For further information address either the ACTING PRESIDENT, or the Superintendent, at Northfield, Vt.

THE REVEILLE.

The cadets conduct a monthly magazine devoted to the interests of the University, the Alumni, and the Corps itself. Upon this paper excellent drill in journalism is afforded the cadets.

READING ROOM.

A reading room is maintained by the cadets, which is provided with the leading literary, political, and technical periodicals of the day.

DODGE HALL.

Through the generosity of General Grenville M. Dodge and other friends, the Trustees have been enabled to erect a four-story brick building to meet the increasing needs of the University for section rooms and laboratories. This building is now completely furnished and equipped, and greatly adds to the facilities of the University.

DRILL HALL.

The University has recently acquired possession of a commodious building, which is used as a Drill Hall.

MESS HALL.

The University Mess Hall is a large building, in which several members of the Faculty with their families reside, and where they, with the corps of cadets, take their meals.

STUDENTS' SOCIETIES.

Two literary societies exist among the students, in which valuable literary work is done, while at the same time social privileges are enjoyed. These societies are in every way approved by the authorities.

STUDENTS ENTERING

should report upon arrival to the Superintendent, who will give them all necessary instructions as to examinations, etc. The Superintendent will also assign each new student to quarters in Cadet Barracks.

SPRING ENCAMPMENT.

The last two weeks of the spring term are spent in camp, and the Corps receives instruction in all the details of camp life, together with guard duty. While in camp a general review of all the drills is made to insure familiarity with them. During this encampment considerable time is devoted to attack and defence of camp, and to rifle practice.

EXTENDED MARCHES.

The encampment may be varied by extended marches about the State. During the encampment and on the march the Corps is at all times under the command of the Commandant of the University, who is responsible for the conduct of the Cadets.

RELIGIOUS FEATURES.

Prayers are held before the opening of academic exercises on each week-day morning. The following clergymen, who are active resident clergymen of the town, conduct morning exercises: Rev. William S. Hazen, D. D.; Rev. Sylvester Donaldson, and Rev. Homer White, S. T. D. On Sunday morning each cadet is required to attend divine service with some one of the village congregations, the choice being made at the beginning of the term by the cadet himself, if of age, or otherwise by his parents or guardians, and adhered to throughout the term. The societies of the village are: Congregation-

alist, Episcopal, Methodist, Roman Catholic and Universalist. While cadets are held to a strict observance of the rules for religious exercises, and while all immoralities are carefully guarded against, yet the institution is in every respect non-sectarian.

PRIZE SPEAKING.

Through the generosity of Mr. N. Louis Sheldon, class of '84, two prizes of $15 and $10, respectively, are offered to those members of the Sophomore and Freshman classes who show the greatest merit in declamation in a contest held during Commencement week. Prize winners in previous contests are debarred from competing.

HONORABLE MENTION.

The student having the highest general average in his class for the year, providing such average be at least 90 per cent, receives honorable mention at the annual Commencement, and the honor list is printed in the annual Catalogue.

SENIOR MEDALIST.

The member of the Senior class who graduates with the highest general study average, receives the Faculty Gold Medal.

COMMISSIONED OFFICERS.

Upon graduation cadet officers receive commissions signed by the President of the University, and by the Adjutant and Inspector-General of the State.

CONDITIONS.

A student deficient in work at the end of any year is not ranked with the next class until such work is made up. No

cadet is eligible for a commencement honor who has not made up all deficiencies before the first Monday of the spring term of his Senior year. The operation of this rule may be suspended by vote of the Faculty in those rare cases which warrant such action.

ENDOWMENT.

The plan for increased endowment, which has been presented to the friends of the University, has met with a hearty reception, and a considerable amount has already been subscribed. With the rapid growth of the institution, and the large increase in the number of students, new and greater demands are made upon her. To meet these demands a larger endowment will be necessary, and it is earnestly hoped that the Alumni and friends of Norwich University will do their part toward assisting the institution.

NORTHFIELD, VT., June 27, 1889.

A business meeting of the Alumni and Past Cadets of Norwich University was called to order at 4:30 P. M., with President Joseph Stedman in the chair.

Prof. J. B. Johnson, of Northfield, was elected to receive subscriptions and donations toward a permanent endowment fund, the income to be used for the current expenses of Norwich University and support of the Faculty, and to be held by him in trust for that purpose only, excepting that, if the University cease to exist, then in trust for the donors.

Further, said Johnson to give good and sufficient bonds for the faithful execution of his trust in a sum not less than $5,000, and with at least two responsible sureties. The bond as drawn and signed to be approved by J. C. B. Thayer, Treasurer of Norwich University.

Moneys and communications concerning endowment may be sent to the Trustee of the Fund, Prof. J. B. Johnson.

Throughout the history of the University there has been maintained a very high standard of Military excellence. From the first it has held the distinction of being the foremost Military institution in the land, with the exception of the National Academy. The following, from Gen. W. T. Sherman's speech before Ransom Post, St. Louis, Mo., will sustain the above statement regarding this University. In speaking of General T. E. G. Ransom, he says: "He became Principal of Norwich University, THEN, as SINCE, an Academy of great renown. This military school at one time almost rivaled the National Academy of West Point, and there many a man who afterward became famous in the Mexican and Civil wars, first drank in the inspirations of patriotism, and learned the lessons of the art of war." The reputation of the New England regiments must be attributed to discipline and instruction received at this institution, as much as to any other single factor; and the "Green Mountain Boys" owe their national reputation and success largely to their training within her halls. Her Honor Roll in the late Civil war contains the names of twelve Generals (among them Gens. Dodge, Buel, Seymour, Wright, Ransom); twenty-five Colonels, forty field officers, fifty-five Captains, one hundred and forty-three lieutenants, and a long list of non-commissioned officers. It has been the highest endeavor of the Trustees and Faculty to maintain in every respect the military reputation of the University. Attention to the course of Military Instruction will give a fair idea of the training given, and a copy of the Rules and Regulations will give a complete statement of the duties required of

General Statement.

Norwich University is distinctively a military institution, but it is in no way reformatory in its nature.

The aim of the institution is to maintain a regular routine of military duty, which affords most valuable training to the young man engaged in study.

While strictly maintaining the military system, the student is allowed every liberty consistent with the system. It is only when wilful infractions of properly constituted authority occur that the impersonal working of the military system exerts its corrective influence.

STANDING, MILITARY CUSTOMS, ETC.

Academic standing depends upon recitations; Military standing upon marks of merit and demerit, together with proficiency in military duties. Immoralities, technical and minor offences, are marked with demerits, and are punishable in other ways. Wherever purely academic duties require variation in special matters, the analogies of military usage are maintained, so far as practicable. The students are called cadets, and are under military discipline. The cadet officers are appointed on the basis of Military and Academic standing. Every cadet is required to wear the uniform of the University when on duty.

UNIFORMS.

A single-breasted dress coat of dark blue cloth, University buttons; trousers dark blue, with light red stripe; black cravat; standing collar; U. S. regulation helmet, with usual gilt ornament; forage cap; boots, or high shoes of black, unglazed leather. The commandant furnishes accurate directions for the tailor's use, if desired.

Sufficient time is given for students to wear out their citizen's suits before they are required to procure uniforms.

LIBRARY AND COLLECTIONS.

The University library is very well supplied with works of reference, and in addition contains many works of great value, which are not to be found in newer libraries. Our mineral collection is ample for the purpose of instruction. Manufacturers, dealers in building materials, and others are requested to send specimens of their products to the Department of Engineering. Specimens in Natural History, Minerals, etc., will be gladly received by the Superintendent. Alumni, Past Cadets, Authors, and Publishers are earnestly requested to contribute their publications to the University Library.

RECOGNITION BY STATE AND GENERAL GOVERNMENTS.

The fact that the State of Vermont has recognized Norwich University by making her Corps of Cadets a part of the State Militia and by granting her free scholarships, shows the extent to which the State government values the institution as a training school for the citizen soldier, and attests her gratitude for services already rendered. For like reasons the U. S. Government has detailed an active army officer for duty at the University as Professor of Military Science.

RESIDENT IN BARRACKS.

A member of the Faculty resides in the barracks with the cadets, thus insuring a strict observance of rules and regulations.

LOCATION.

Northfield being located on the main line of the Central Vermont railroad is easy of access from all directions, and

students are given reduced rates upon application. Telegraphic communication can be had directly with the University barracks, through the Western Union Company. There is probably no State that can boast of a more healthful climate than Vermont. Northfield is in the central part of the State, and is ten miles from the Capital, Montpelier. A popular resort in summer, it loses none of its healthfulness in winter. The water is pure and clear, and the University and village are well supplied from mountain springs.

Routine of Duty.

Reveille, 6:30 A. M.; Police Call and Inspection of Quarters, 7 A. M.; Breakfast, 7:30 A. M.; Prayers, 8:45 A. M.; Study and Recitation hours from 9 A. M. until 12 M.; Dinner, 12:15 P. M.

Afternoon Roll Call, 1:35 P. M.; Study and Recitation, from 1:45 P. M. until 3:45 P. M.; Drill, 4:10 P. M. until 5:10 P. M.; Supper, 5:30 P. M.; Retreat, 7 P. M.; Tattoo, 9:30 P. M.; Taps (Lights out), 10 P. M.

Retreat on Friday, Saturday, and Sunday nights at the formation for supper. On Friday and Saturday nights there is no tattoo; roll call and taps at 10:30 P. M.

SUNDAYS.

Police Call, 7:30 A. M.; Breakfast, 7:50 A. M.; Sunday Morning Inspection, 9:30 A. M.; Church, 10:30 A. M.; Dinner, 1:20 P. M.; Supper, 5 P. M.

On Friday nights there is release from quarters until 11 P. M. for Seniors, and until 10:30 P. M. for other Cadets.

On Saturday nights all Cadets are allowed to attend society meetings until 10:30 P. M. without permits.

Permits are granted to Cadets in good standing to go out for social purposes on Saturday or Sunday evening, as they may elect.

The foregoing routine is varied during the Spring Term and the Annual Encampment, as circumstances may render best.

The President with the concurrence of the Faculty periodically issues a detailed list of calls, and directs such additional roll-calls and makes such changes in the foregoing routine of duty as the discipline of the corps and changes in Academic and Military duty may necessitate.

Associate Alumni and Past Cadets.

By action of the Trustees, the Alumni and Past Cadets are entitled to elect one of the Board of Trustees each year. At a meeting held on Wednesday, June 26, 1889, it was decided that the meetings of the Association shall hereafter be held annually on the day preceding Commencement, at ten o'clock in the forenoon.

OFFICERS FOR 1892-'93.

President:
Charles Dole, '69, Northfield, Vt.

Vice-Presidents:
J. J. DEWEY, '65.
REV. WALTER DOLE, '70.
T. C. McILVAINE, '76.
F. L. HOWE, '80.
A. F. BOOTH, '91.

Secretary and Trustee of the Alumni Endowment Fund:
J. B. JOHNSON, '79, Northfield, Vt.

Treasurer:
L. B. JOHNSON, '88, Northfield, Vt.

Committee on Increasing the Alumni Endowment Fund:
N. L. SHELDON, '84, Boston, Mass.
D. E. WILMARTH, '84, Boston, Mass.
R. L. IRISH, '89, Brooklyn, N. Y.

Members of the Association not present may vote by written ballot at the annual election of Trustees. It is therefore important that each Past Cadet keep the Secretary informed of his full address, and notify him promptly of any change.

BOSTON ALUMNI ASSOCIATION.

ANNUAL REUNION IN BOSTON.

OFFICERS FOR 1893.

President:
GEORGE W. HOBBS, ESQ., '57.

Vice-Presidents:
HON. G. H. HATHAWAY, '27.
WM. R. CUTTER, '69.
W. E. HASSAM, '87.

Secretary:
N. L. SHELDON, ESQ., '84, Boston, 146 Franklin St.

Treasurer:
GEORGE D. THOMAS, '76.

Endowment Fund Committee:
J. Q. A. MCCOLLESTER, '56.
G. D. THOMAS, '76.
N. L. SHELDON, '84.
J. K. EGERTON, ESQ.
REV. HOWARD F. HILL, '67.

NEW YORK ALUMNI ASSOCIATION.

ANNUAL REUNION IN NEW YORK CITY.

OFFICERS FOR 1892.

President:
GRENVILLE M. DODGE, '53.

Vice-Presidents:
CYRUS H. FAY, '37.
CLAYTON E. RICH, '63.
WILLIAM R. MEAD, '64.
WILLIAM R. RUMBAUGH, '76.

Secretary and Treasurer:
GEORGE R. MINER, '83.
(Address, New York *Herald*.)

Graduates of 1890.

C. F. PARKER,
Civil Engineer, with J. W. Ellis, Woonsocket, R. I.

C. E. COLLINS,
Civil Engineer for Pittsfield, Mass.

S. B. ADAMS,
Boiler Inspector, Boston, Mass.

D. W. LEWIS,
Clerk, Boston and Maine Railway.

HERMAN DRESSEL, JR.,
Principal North Bennington High School.

H. J. DANE.
Pharmacist, Chicago, Ill.

I. R. MOWER.
Pharmacist, Chicago, Ill.

J. H. JUDKINS,
Physician, Northfield, Vt.

Graduates of 1891.

GEORGE FRANKLIN ABBOTT,
Assistant Civil Engineer, West End Street Railway, Boston.

ALFRED FREDERICK BOOTH,
Assistant Principal, Northfield Graded School.

EDWARD AIKIN SHUTTLEWORTH,
2d Lieut. 11th Inft., U. S. Army.

WILLIAM HIBBARD SPRAGUE,
Law Student, Montpelier, Vt.

HARRY GORDON WOODRUFF,
Cashier First National Bank, Chelsea.

ETHAN ALLEN SHAW,
Instructor in Normal School, Randolph, Vt.

CARL GILMAN DOLE,
Stenographer, West Superior, Wis.

Assistant Cashier Northfield Savings Bank.

BURTON WILEY FARNHAM,
Assistant Civil Engineer in City Engineer's office.
Lowell, Mass.

FRED MINER GOODHUE,
Assistant Hydraulic Engineer,
Department of Locks and Canals, Lowell, Mass.

PERCY GATES SMITH,
Assistant Engineer, S. S. & E. B. Railway.

CLARENCE BENNETT RIGGS,
Division Engineer, Black River (Vt.) Railway.

Graduates of 1892.

E. W. CLARK.
Draftsman, Boston Bridge Company.

J. S. CRAIGUE.
Assistant Engineer, Boston Board of Survey.

C. J. C. EVANS.
Assistant Engineer, with J. W. Ellis, Woonsocket, R. I.

C. W. PIERCE.
Associate Editor of the Bennington *Banner*.

R. H. FORD.
Civil Engineer, Central Vermont Railway.

E. H. RYAN.
Assistant Hydraulic Engineer, Lowell, Mass.

D. C. WEBB.
Book-keeper with L. H. Webb, Braintree, Vt.

B. W. GLEASON.
Dealer in Real Estate, Boston, Mass.

HONOR LIST, 1892.

Valedictorian.
EDMUND H. RYAN.

Salutatorian,
EPHRAIM W. CLARK.
Senior Gold Medalist,
EDMUND H. RYAN.

HONORABLE MENTION.

EDMUND H. RYAN, '92.
EBEN W. GAYNOR, '93.
LEROY C. HULBURD, '94.
WALTER G. HUNTLEY, '95.

WINNERS IN PRIZE SPEAKING.

1st Prize, WALTER G. HUNTLEY, '95.
2d Prize, B. H. PRIOR, '95.

BATTALION ORGANIZATION.

FREDERICK CLARK KIMBALL, 2d Lieut., 5th U. S. Infantry, *Commandant.*

FRANK DUDLEY HOLBROOK, Cadet 1st Lieut. and Adjutant.

GEORGE LESLIE ANDREWS, Cadet 1st Lieut. and Quartermaster.

FRANK ALBERT GOKEY, Cadet Sergeant-Major.

CADET COMPANIES.

"A."

Capt. FRANK ALDEN MANUEL,
1st Lieut. EBEN WATSON GAYNOR,
2d Lieut. WILBUR EDSON HURLBUT.

"B."

Capt. HIRAM NATHANIEL MATTISON,
1st Lieut. OREN LUTHER PEASE,
2d Lieut. EDWARD CUSHMAN BENNETT.

SENIOR CLASS.

George Leslie Andrews,	Gouldsville.
Edward Cushman Bennett,	Bennington.
Eben Watson Gaynor,	Gouldsville.
Frank Dudley Holbrook,	Newport.
Wilbur Edson Hurlbut,	Georgia.
Frank Alden Manuel,	North Troy.
Hiram Nathaniel Mattison,	Shaftsbury.
Orren Luther Pease,	Hartford.

JUNIOR CLASS.

Leo Bertram Clogston,	South Royalton.
Herman Arthur Gillette,	Huntington.
Frank Albert Gokey,	Northfield.
Harvey Levi Hinman,	North Stratford, N. H.
Howard Clinton Holden,	Barre.
LeRoy Chittenden Hulburd,	Brasher Falls, N. Y.
William Hazelton Rollo,	St. Albans.
Raymond Underwood Smith,	Wells River.
Harlan Badger Wason,	Methuen, Mass.
George Duff Whiteside,	Vergennes.

SOPHOMORE CLASS.

Lester Hazen Bradley,	Ilion, N. Y.
Edgar Fletcher Carruthers,	Bellows Falls.
Charles Horace Davis,	Northfield.
Fred Carnot Davis,	Northfield.

Frank James Donahue, - - - - - - Proctor.
George Donnelly, - - - - - - - Bennington.
Ray Storrs Dow, - - - - - - Sycamore, Ill.
Ernest Willard Gibson, - - - - - - Londonderry.
Philo Remington Hoefler, - - - - - Ilion, N. Y.
Walter George Huntley, - - - - - Northfield.
Sheridan David McAllister, - - - - - Warren.
George Soter Miller, - - - - - Lowell, Mass.
Harry Chester Moseley, - - - - - - Northfield.
Bert Henry Prior, - - - - - - - Underhill.
James Ernest Ross, - - - - - Ellendale, N. D.
Michael John Ryan, - - - - - - Gouldsville.
George Eber Storrs, - - - - - - Island Pond.
Hal Holmes Stearns, - - - - - Winthrop, N. Y.
Samuel Charles Yeaton, - - - - Brooklyn, N. Y.

FRESHMAN CLASS.

Arthur Gilbert Andrews, - - - - - Northfield.
James Leland Averill, - - - - - - Northfield.
Roy Davenport Baker, - - - - North Adams, Mass.
William Preston Beauclerk, - - - - - Irasburgh.
George Horace Briggs, - - - - - - Northfield.
Charles Howard Brooks, - - - - - - Northfield.
William Granville Brooks, - - - - - Northfield.
Walter Brown, - - - - - - - - Northfield.
Charles Sargent Carleton, - - Cumberland Mills, Me.
Herbert Sawyer Clark, - - - - - - Northfield.
John Leslie Collins, - - - - - - Northfield.
Arthur Hall Cushman, - - - - North Bennington.
Harry Ray Dole, - - - - - - - Northfield.
Willard Dudley Emery, - - - - - Montpelier.
Gardner Gates, - - - - - - - Cambridge.
John Albert Holmes, - - - - Haydenville, Mass.
Phil Sheridan Howes, - - - - - - Northfield.

Harry Christopher Kerr, - - - - - Granville.
Edward Michael McCarty, - - - - Windsor.
Charles Albert Plumley, - - - - - Northfield.
Carroll John Scribner, - - - - - - Stowe.
Leon Anson Skinner, - - - - South Royalton.
Charles Almont Stevens, - - - - Gouldsville.
Fred B. Thomas, - - - - - - Stowe.
Samuel Adrian Thomas, - - - - - Stowe.
Dean Clyde Warren, - - - - - Stowe.
Frank Robert Wright, - - - - - Newport.
George Frederick Wright, - - Springfield, Mass.

Calendar, 1892-'93-'94.

FALL TERM, 1892.

September 22, Thursday:—Entrance Examinations and Registration.
December 19–22:—Term Examinations.
December 22, Thursday:—Term ends.

WINTER TERM, 1893.

January 5, Thursday:—Entrance Examinations and Registration.
February 22, Wednesday:—Washington's Birthday.
March 20–23:—Term Examinations.
March 23, Thursday:—Term ends.

SPRING TERM, 1893.

April 6, Thursday:—Entrance Examinations and Registration.
May 10, Wednesday:—Seniors will present graduation theses.
May 30, Tuesday:—Memorial Day.
June 1, Thursday:—Senior Examinations.
June 12–17:—Final Examinations.
June 19:—Annual Encampment begins.
June 25:—Baccalaureate Sermon.
June 27, Tuesday:—Sheldon Prize Speaking.
June 28, Wednesday:—Annual Meeting of Trustees. Alumni Exercises.
June 29, Thursday:—Annual Commencement.
June 30, Friday:—Entrance Examinations.

FALL TERM, 1893.

September 21, Thursday:—Entrance Examinations and Registration.
December 18–21:—Term Examinations.
December 21, Thursday:—Term ends.

WINTER TERM, 1894.

January 4, Thursday:—Entrance Examinations and Registration.
February 22, Thursday:—Washington's Birthday.
March 19–22:—Term Examinations.
March 22, Thursday:—Term ends.

April 5, Thursday:—Entrance Examinations and Registration.

May 10, Thursday:—Seniors will present graduation theses.

May 30, Wednesday:—Memorial Day.

June 1, Friday:—Senior Examinations.

June 11–16:—Final Examinations.

June 18:—Annual Encampment begins.

June 24:—Baccalaureate Sermon.

June 26, Tuesday:—Sheldon Prize Speaking.

June 27, Wednesday:—Annual Meeting of Trustees. Alumni Exercises.

June 28. Thursday:—Annual Commencement.

June 29. Friday:—Entrance Examinations.

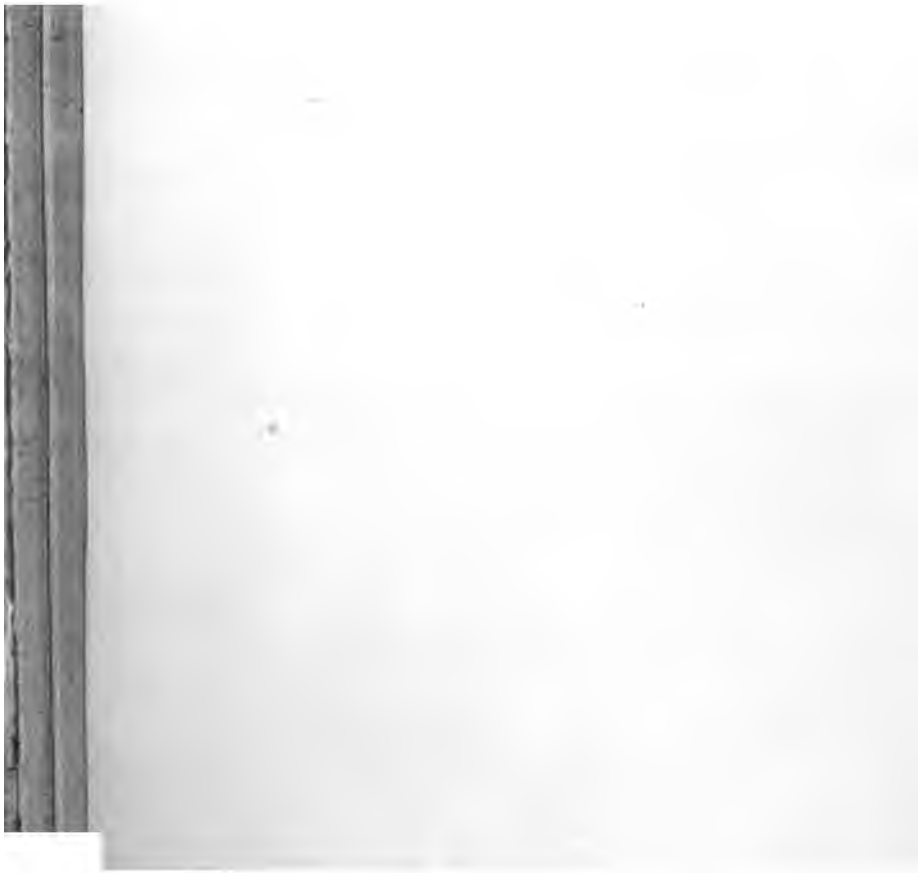
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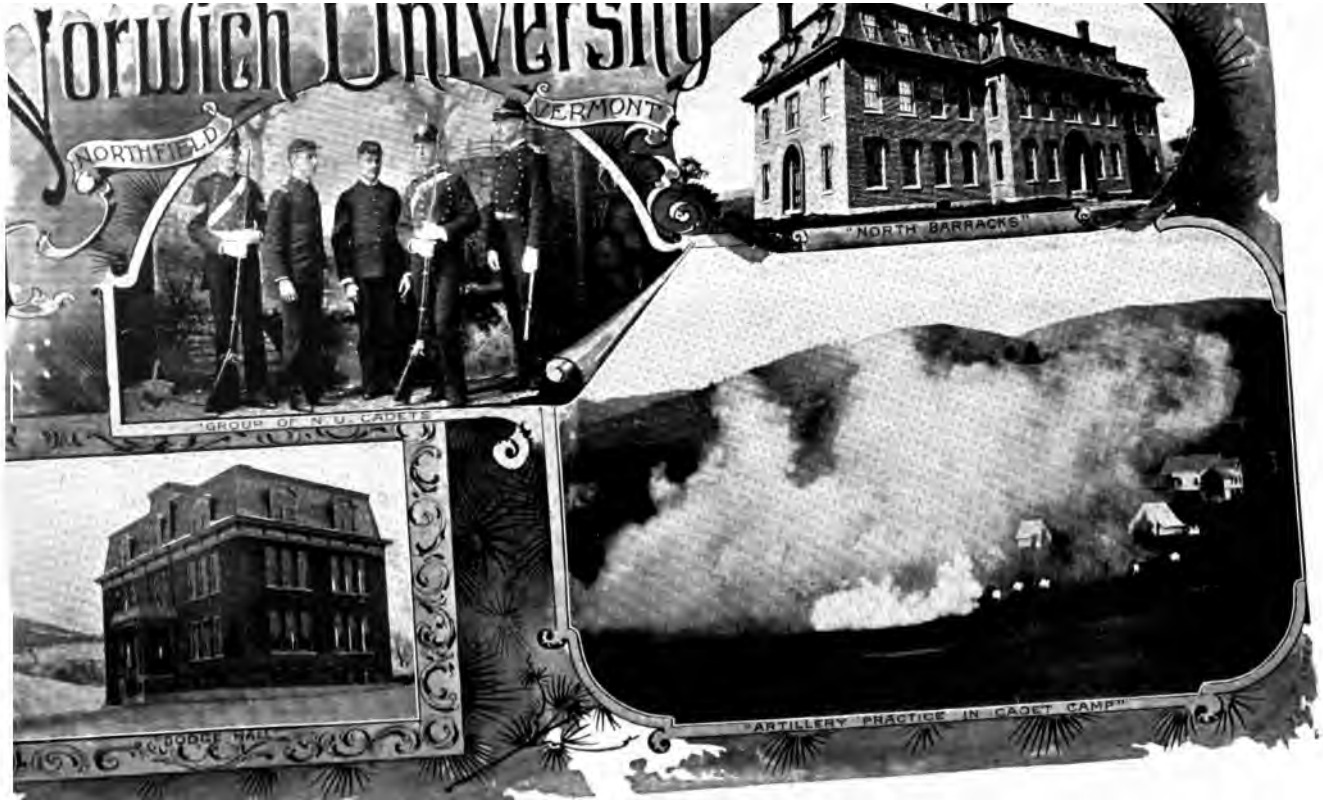
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Norwich University,

Northfield, Vermont.

1893.




Norwich University
NORTHFIELD
VERMONT
"GROUP OF N. U. CADETS"
"NORTH BARRACKS"
"ARTILLERY PRACTICE IN CADET CAMP"

FIFTY-NINTH ANNUAL CATALOGUE

— OF —

NORWICH UNIVERSITY.

MILITARY, SCIENTIFIC AND CLASSICAL.

NORTHFIELD, VT.





CAPTAIN ALDEN PARTRIDGE,

Founder.

Corporation.

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Acting President,
HON. GEORGE NICHOLS, M. D., LL. D.

Secretary,
JOSEPH K. EGERTON,
NORTHFIELD, VT.

Treasurer,
J. CAREY B. THAYER, ESQ.

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JOSEPH K. EGERTON,		Northfield.
THOMAS J. BOYNTON,		Montpelier.
FRANK L. HOWE,		Northfield.
CHARLES M. DAVIS, B. S.,		Northfield.
N. LOUIS SHELDON, A. M.,	elected by Alumni, term expires 1895,	Norwood, Mass.
GEORGE D. THOMAS, Ph. B.,	" " 1896,	Waltham, Mass.
JOHN R. MOORE, B. S.,	" " 1893,	Elizabeth, N. J.
CHARLES DOLE, A. M.,	" " 1894,	Northfield.
ETHAN A. SHAW, C. E.,	" " 1897,	Randolph.

Faculty.

HON. GEORGE NICHOLS, M. D., LL. D.,
ACTING PRESIDENT.

CHARLES C. BRILL, A. M.,
SUPERINTENDENT.

JOHN B. JOHNSON, A. M., C. E.,
Professor of Mathematics and Civil Engineering.

CHARLES C. BRILL, A. M.,
Professor of Chemistry and Physics.

FREDERICK C. KIMBALL, 2nd Lieut. 5th Inft., U. S. A.,
Professor of Military Science.

EDSON L. WHITNEY, Ph. D., LL. B.,
Professor of History and Modern Languages.

HERBERT R. ROBERTS, A. B.,
Professor of Latin, Greek and English.

ASA HOWE, A. M., C. E.,
Professor of Engineering Field Work.

FRANK PLUMLEY, LL. B.,
Lecturer on Constitutional and Commercial Law, and Social Science.

WILLIAM LINE, Observer U. S. Weather Bureau,
Instructor in Meteorology and Military Signaling.

WALTER G. HUNTLEY,
Assistant in Chemical Laboratory.

HARLAN B. WASON,
Instructor in Drawing.

Military Staff.

FREDERICK C. KIMBALL, 2nd Lieut. 5th Inft., U. S. A.,

COMMANDANT.

JOHN B. JOHNSON, Captain N. G. V.,

QUARTERMASTER.

WILLIAM B. MAYO,

SURGEON.

REV. HOMER WHITE,

CHAPLAIN.

JAMES EVANS,

ARMORER.

Requirements for Admission.

All candidates for admission to the University must be at least fifteen years of age, and must present satisfactory evidence of good moral character.

TO THE COURSES IN CIVIL ENGINEERING, CHEMISTRY, AND SCIENCE AND LITERATURE.

Candidates are examined in the following studies:—

MATHEMATICS.—Arithmetic; Algebra to Quadratics; Geometry; First four books, Davies' Legendre or an equivalent.

ENGLISH LANGUAGE.—Grammar; Composition, with special attention to punctuation and the use of capitals.

GEOGRAPHY.—Physical and Political Geography.

HISTORY.—History of the United States.

TO THE COURSE IN ARTS.

In addition to the examination in Mathematics, English Language, Geography and History, laid down for the courses in Science, examinations are as follows:—

LATIN.—Cæsar's "Commentaries," four books, or Sallust's "Catiline"; Virgil's "Æneid," six books; Cicero, four orations.

GREEK.—Xenophon's "Anabasis," four books, or one hundred pages Goodwin's Greek Reader; Homer's "Iliad," two books.

Graduates from approved High Schools are admitted upon certificates.

Candidates not fully prepared in all the requirements, may be conditioned for one term.

ADVANCED STANDING.

Candidates for advanced standing must pass satisfactory examinations in the studies already completed by the class which they propose to enter, and in those required for admission. Those, however, from other colleges, should bring certificates of honorable dismissal, and marks showing standing. The latter may, on approval by the Faculty, be taken in lieu of examinations.

COURSE IN MILITARY INSTRUCTION.

For all Students throughout the four years. Exercises, Drills or Lectures every day at 4 o'clock, P. M.

FALL TERM.

Settings Up, Calls, Manual of Arms, School of the Company and Extended Order Drill; Bayonet Exercises indoors in bad weather.

WINTER TERM.

Broadsword and Sabre Drill, Manual of the Sword, and Fencing. Juniors and Seniors, Lectures on Military Engineering or Military Science and Art of War.

SPRING TERM.

Artillery Drill, Rifle Practice, Battalion Drill, Ceremonies, Signaling, Lectures on Customs of the Service, Camping, and Practice Marches.

The Cadets are at all times under military discipline, and strict observance of military customs is required.

Cadets are detailed as Adjutant, Officer of the Day, Guard, etc., in their turn, and are instructed in making out the different kinds of military reports; and are trained in the duties incident to field or garrison.

Military duties and exercises are so arranged as not to occupy the time that would otherwise be devoted to study. They are attended to at those hours which are generally passed by students in idleness, or devoted to useless amusements, for which they are made a pleasant, healthful and profitable substitute. They develop that bearing and those manly arts which always distinguish the soldier, while affording excellent physi-

Military training prepares a young man's body, as discipline prepares his mind, to meet, with dignity and coolness, the emergencies sure to arise in his life, whatever his profession may be, and in moments of excitement or danger gives him that firmness and self-control that characterize the gentleman.

Norwich University numbers among its graduates many names which stood high in the profession of arms during the war with Mexico and the War of the Rebellion, and at the present time many of her graduates are serving with distinction as Officers of the National Guard and of the Regular Army of the United States.

Examinations are held in tactics, orders, duties and customs of military service, to insure familiarity with them.

Courses of Study.

Four regular courses have been established, as follows:—

I. A course in Civil Engineering.
II. A course in Chemistry.
III. A course in Science and Literature.
IV. A course in Arts.

The courses in Civil Engineering and Chemistry have a distinctly practical bearing, and give a thorough training for the technical professions.

The course in Science and Literature is intended for such as may not wish to pursue a full course in Mathematics, or one for a distinctly scientific profession, and is designed to furnish a liberal preparation for the professions.

Each of these courses extends through four years, and is intended to give the student a liberal culture.

Changes are made in the course in Chemistry to meet the wants of students preparing for Medicine and Pharmacy.

FRESHMAN . .

FOR ALL COURSES EXCEPT THE COURSE IN ARTS.

NOTE.—The figures after each subject indicate the number of recitations per week, or its equivalent.

FALL TERM.—Algebra, 5; French or German, or Latin, 5; Inorganic Chemistry, 5, (text, 3; laboratory, 2); Rhetoric, 2; Free Hand Drawing, 6; English, 1.

WINTER TERM.—Geometry, 5; French or German, or Latin, 5; Inorganic Chemistry, 5, (text, 3; laboratory, 2); Rhetoric, 2; Lettering, 3; Tinting and shading, 3; English, 1.

SPRING TERM.—Trigonometry, 5; French or German, or Latin, 5; Inorganic Chemistry, 5, (text, 3; laboratory, 2); Rhetoric, 2; Mechanical Drawing, 6; English, 1.

I. THE COURSE IN CIVIL ENGINEERING.

Leading to the Degree of Bachelor of Science in Civil Engineering.

SOPHOMORE YEAR.

FALL TERM.—Analytical Geometry, 5; German or French, 5; Mechanics and Heat, 5; Descriptive Geometry, 3; Descriptive Drafting, 6; English, 1.

WINTER TERM.—Differential Calculus, 5; German or French, 5; Electricity and Magnetism, 5; Descriptive Geometry, 3; Shades and Shadows, Linear Perspective, and Isometrical Projection, 6; English, 1.

SPRING TERM.—Integral Calculus, 3; Land Surveying, Leveling, and Field Work, Use and Adjustments of Compass, [illegible] and Level, 6; (text, 2; field work, 4;) German or [illegible] Optics, 5; Detail Drawing, Trac-

JUNIOR YEAR.

FALL TERM.—Mechanics of Engineering—Statics and Dynamics, 5; Geology, 5; Colored Topography, Pen Topography, and Plotting of Surveys, 6; Advanced Surveying—Topographical, Municipal, and Geodetic (Use of stadia and plane table), 6; (text, 2; field work, 4); English, 1.

WINTER TERM.—Mechanics of Engineering—Materials, 5; Blow-pipe Analysis and Determinative Mineralogy, 4; Qualitative Analysis, 6; Theory of Trusses and Arches, 3; Graphics of Trusses and Arches, 6; English, 1.

SPRING TERM.—Bridge Stresses, 3; Stone Cutting, 2; Meteorology, 2; Mechanics of Engineering—Hydraulics, Retaining Walls, Masonry Dams, 3; Botany, 3; Drawing—Bridge Stresses, 4; Stone Cutting, 2; English, 1.

SENIOR YEAR.

FALL TERM.—Commercial Law, 5; Metallurgy, 2; Bridge Designing (lectures), 2; Railroad Engineering (curves, turnouts, and practical location of railway), 6; (text, 2; field work, 4;) Drawing.—Design of Bridges, 6; English, 1.

WINTER TERM.—Constitutional or International Law, 5; Hydraulic and Sanitary Engineering, 3; Civil Engineering—Materials of Engineering, Foundations, Canals, Highways, 5; Design of Engineering Structures, 6; English, 1.

SPRING TERM.—Spherical Astronomy.—Determination of Time, Latitude, etc., 3; Contracts and Specifications, 2; Political Economy, 5; Hydrographic Surveying (text, and field work), 2; Railroad Engineering, 3; Preparation of Thesis, 5.

II. COURSE IN CHEMISTRY.

Leading to the Degree of Bachelor of Science in Chemistry.

SOPHOMORE YEAR.

FALL TERM.—Chemical Technics, 5; French or German, or Latin, 5; Mechanics and Heat, 5; Qualitative Analysis, 10; English, 1.

WINTER TERM.—French or German, or Latin, 5; Electricity and Magnetism, 5; Blow-pipe Analysis, 10; Qualitative Analysis, 10; English, 1.

SPRING TERM.—French or German, or Latin, 5; Accoustics and Optics, 5; Qualitative Analysis, 15; Land Surveying, 6; (text, 2, field work, 4); English, 1.

JUNIOR YEAR.

FALL TERM.—Ancient History, 3; Geology, 5; Organic Chemistry, 2; Gravimetric Analysis, 15; Zoölogy, 3; English Literature, 2; English, 1.

WINTER TERM.—Organic Chemistry, 2; Gravimetric Analysis, 15; English Literature, 2; English, 1.

SPRING TERM.—English Literature, 2; Organic Chemistry, 2; Volumetric Analysis, 15; Botany, 3; English, 1.

SENIOR YEAR.

FALL TERM.—Commercial Law, 5; Metallurgy, 2; Toxicology, 10; Medical Chemistry, 5; Psychology, 5; English, 1.

WINTER TERM.—Constitutional or International Law, 5; Water Analysis, 10; Agricultural Chemistry, 10; Logic, 5; English, 1.

SPRING TERM.—Political Economy, 5; Gas Analysis, 10; Thesis, 5; Assaying, 4.

III. COURSE IN SCIENCE AND LITERATURE.

Leading to the Degree of Bachelor of Science.

SOPHOMORE YEAR.

FALL TERM.—Analytical Geometry, 5; French or German, or Latin, 5; Mechanics and Heat, 5; Ancient History, 3; English Literature, 2; English, 1.

WINTER TERM.—French or German, or Latin, 5; Electricity and Magnetism, 5; Calculus, 5; Medieval History, 3;

SPRING TERM.—French or German, or Latin, 5; Acoustics and Optics, 5; Analytical Chemistry, 10; Land Surveying, 6; English Literature, 2; Modern History, 3; English, 1.

JUNIOR YEAR.

FALL TERM.—French or German, or Latin, 5; Geology, 5; Zoölogy, 3; English History, 5; English Literature, 2; English, 1.

WINTER TERM.—French or German, or Latin, 5; Analytical Chemistry, 10; Blowpipe Analysis, 4; English Literature, 2; Colonial History, 5; English, 1.

SPRING TERM.—French or German, or Latin, 5; English Literature, 2; U. S. History, 5: Botany, 3; Meteorology, 2; English, 1.

SENIOR YEAR.

FALL TERM.—French or German, or Latin, 5; Commercial Law, 5; Metallurgy, 2; Psychology, 5; English, 1.

WINTER TERM.—French or German, or Latin, 5; International Law, 5; Constitutional Law, 5; Logic, 5; English, 1.

SPRING TERM.—French or German, or Latin, 5; Political Economy, 5; Astronomy, 3; Ethics, 3; Thesis, 5.

IV. COURSE IN ARTS.

Leading to the Degree of Bachelor of Arts,

FRESHMAN YEAR.

FALL TERM.—Algebra, 5; Memorabilia and Greek Prose, 5; Livy and Latin Prose, 5; Rhetoric, 2; Free Hand Drawing, 6: English, 1.

WINTER TERM.—Geometry, 5: Herodotus, 5; Horace—Odes and Epodes, 5; Rhetoric. 2; Tinting and Shading, 3; Lettering, 3; English, 1.

SPRING TERM.—Trigonometry, 5; Homer's Odyssey, 5; Horace—Satires and Epistles, 5; Rhetoric, 2; Mechanical Drawing, 6; English, 1.

SOPHOMORE YEAR.

FALL TERM.—Sophocles, 3; Juvenal's Satires, 3; Mechanics and Heat, 5; Ancient History, 3; English Literature, 2; English, 1.

WINTER TERM.—Demosthenes, 3; Tacitus, 3; Electricity and Magnetism, 5; English Literature, 2; Medieval History, 3; English, 1.

SPRING TERM.—Æschylus, 3; Cicero's Select Letters, 3; Acoustics and Optics, 5; English Literature, 2; Modern History, 3; English, 1.

JUNIOR YEAR.

FALL TERM.—Demosthenes, 2; Pliny, 2, Geology, 5; French or German, 5; Inorganic Chemistry, 5; English Literature, 2; English, 1.

WINTER TERM.—Plato, 2; Plautus, 2; Inorganic Chemistry, 5; French or German, 5; English Literature, 2; Colonial History, 5; English, 1.

SPRING TERM.—Greek Syntax, 2; Latin Syntax, 3; French or German, 5; Inorganic Chemistry, 5; English Literature, 2; U. S. History, 5; English, 1.

SENIOR YEAR.

FALL TERM.—Analytical Chemistry, 10; French or German, 5; Commercial Law, 5; Psychology, 5; English, 1.

WINTER TERM.—French or German, 5; International Law, 5; Constitutional Law, 5; Logic, 5; English, 1.

SPRING TERM.—French or German, 5; Political Economy, 5; Thesis, 5; Astronomy, 3; Ethics, 3.

Military instruction throughout all courses the same as laid

Text Books and Books of Reference.

Mathematics.—Astronomy, Young. Algebra, Wells' University. Analytical Geometry, Loomis. Calculus, Taylor. Geometry, Davies' Legendre. Mechanics, Church. Trigonometry, Davies. Descriptive Geometry, Church.

Engineering.—Land Surveying, Hodgman. Advanced Surveying, Johnson. R. R. Surveying, Searles. Bridge Stresses, Merriman. Civil Engineering, Mahan and Trautwine. Specifications, Haupt. Hydraulic Engineering, Fanning. Sanitary Engineering, Philbrick. Stereotomy, Mahan. Dubois' Stresses in Framed Structures. Wellington's Earthwork Computations.

Sciences.—Botany, Gray's School and Field Book. Chemistry, Analysis, Qualitative, Elliott, Fresenius. Volumetric Analysis, Sutton. Analysis, Quantitative, Fresenius. Organic Industrial Chemistry, Sadtler. Blow-pipe, Plattner's Qualitative and Quantitative, by Cornwall. Metallurgy and Assaying, Hiorn's Text-Book of Elementary Metallurgy, Hiorn's Practical Metallurgy and Assaying. Agricultural Chemical Analysis, Frankland. Medical Chemistry, Ralfe's Clinical Chemistry. Organic, Remsen. Physics, Gage's Elementary, with lectures on special subjects. Zoology, Packard. Geology, Winchell's Geological Studies. Mineralogy, Dana's Manual, and Foye's Tables. Food Adulteration and its Detection, Battershall.

History, Political Science, and Law.—History: Greek, Smith; Roman, Merivale; Mediæval and Modern, Myers; English, Green. Political Economy, Macvane. Pschyology, Baldwin. Logic, Jevons. Ethics, Robinson. International Law, Woolsey. Constitutional Law, Cooley. Commercial Law, Townsend. Thwaites' The Colonies, Johnston's American Politics.

MODERN LANGUAGES.—French: Edgren's French Grammar; Super's French Reader; French Literature. German: Joynes-Meissner's German Grammar; Joynes' German Reader; German Literature.

ENGLISH.—Rhetoric: Clark's Practical Rhetoric; Genung's Practical Rhetoric. Elocution: Clark's Notes on Reading; Bacon's Manual of Gesture. English Literature, Welsh.

DEGREES.

The candidate for any degree must deposit with the Faculty a satisfactory thesis on some scientific or literary subject connected with his department.

DEGREES ON GRADUATION.

The degree of Bachelor of Science in Civil Engineering is conferred upon any student who has completed the course in Civil Engineering.

The degree of Bachelor of Science is conferred upon any student who has completed the course in Science and Literature.

The degree of Bachelor of Science in Chemistry is conferred upon any student who has completed the course in Chemistry.

The degree of Bachelor of Arts is conferred upon any student who has completed the course in Arts.

ADVANCED DEGREES.

The Master's degree in Science or Arts is conferred upon graduates of this University of three years' standing who have taken the corresponding Bachelor's degree, and who, during that time, have been engaged in professional, literary, or scientific pursuits, or have pursued a course marked out by the Faculty, for two years after graduation, and have passed the

The degree of Civil Engineer is conferred upon graduates in Civil Engineering of three years' standing, who have pursued the profession of engineering during that time, have passed the requisite examinations, and have presented a satisfactory thesis; or upon graduates who have completed a post-graduate course.

Subjects and Methods of Instruction.

ENGINEERING.

The work of the first year in this department is common to all courses. The thorough training of the eye and hand in Freehand Drawing is of the greatest importance in all subsequent drafting. The course embraces accurate outline drawing, elementary perspective, sketching, object drawing, pencil shading and designing. The effort is made to produce designers, instead of mere copyists. Practice in lettering large and small drawings, general orders, etc., also in tinting and shading with the right line pen, and with brush and water colors, is given in the second term. Neatness of text, and rapidity of execution are aimed at. In the third term, dexterity in handling drafting instruments is acquired. Various applications of geometry to drafting, and the orthographic and isometric projections of joints and splices in wood construction are taught. Descriptive Geometry is taught in the fourth and fifth terms, with special reference to its applications to shades and shadows, machine construction, stone cutting, and to the design of stone bridges, culverts, spiral stairways, sewer intersections, etc.

The course in bridges begins with the drawing of details, which are measured by students while visiting engineering structures. Thus, while the student acquires facility in drawing, he becomes familiar with the various details of a bridge. An extended course in Bridge Stresses is given in

the ninth term, and in the tenth term the student is given specifications, and required to apply his theoretical knowledge in designing railway and highway bridges of wood, iron and steel, to the minutest details. In Pen Topography and Colored Topography the students use the conventions for map making, and apply them in the maps platted from the land and railroad surveys.

An extended course in Applied Mathematics, or Mechanics of Engineering is given, in which engineering problems concerning rigid bodies at rest or in motion, the strength of engineering materials, and the statics and dynamics of liquids and gases, are practically treated.

The laboratory work of the eighth term and the Metallurgy of the tenth enable the student to study the materials of engineering with regard to strength and constituents. Under Hydraulic, Sanitary, and Civil Engineering, the design and construction of water supply and distribution systems, sewerage systems and sewage disposal, and of canals, tunnels, foundations in water and on land, and river and harbor improvements, are treated.

Six hours of drafting per week are required throughout the course, and while the above subjects are being studied, numerous designs of engineering structures are made in the drafting room. In the Reading Room are placed the best of engineering periodicals, which give descriptions of all new works of special interest, and enable the student to keep up with the latest methods of construction.

In Land Surveying and Leveling, practice in using and adjusting instruments is given, and the most approved methods of map making, dividing up and parting off land, and supplying omissions in old surveys are taught both in class-room and field. The advanced surveying of the seventh term includes Topographical, Geodetic, and City Surveying, with field work and practice in the drawing room.

The Hydrography of the last term consists of lectures, reci-

tations, and practice on neighboring bodies of water. In Railroad Surveying the field work consists of preliminary surveying, final location, slope staking, etc. Office work is given in making contour maps of the line, profiles, earthwork calculations, estimates of cost, etc. The lectures on Economic Railway Location enable the students to decide between two or more proposed railway lines, and to reduce expenditures in the operation of lines already built.

In the last term students are required to make specifications and contracts for engineering projects of their own design. The course given in this term in Astronomy provides the engineer with as much of this subject as his profession requires.

EQUIPMENT.—The department has a collection of designs for Freehand and Perspective Drawing, and for modern houses, cottages, public buildings, and architectural details. It has also collections of blue prints of the best modern bridges, including pivot draws, plate girders, and various types of pin-connected and riveted trusses, and blue prints of sewer details and sewer constructions It has a collection of models of wooden splices and joints used in bridge construction and carpentry, and of details of machine construction.

The department has procured the best modern instruments for angle and line measurement, including transits, compasses, levels, plane table, sextant, rods, chains, etc., and is prepared to give as much of practical engineering field work as can be given in schools, with the first-class instruments now used in modern engineering.

Special acknowledgment is due for the following gifts to the department since September, 1892:

Col. E. M. Carr, engineer's chain; leveling rod; full set of stadia and cross-section rods.

MATHEMATICS.

In the department of Mathematics, sufficient attention is

paid to practical applications to enable students to see the utility of their studies, and to assist them in the scientific professions.

Theory is developed in as careful and complete a manner as possible, in order that the student may receive that mind discipline which is so valuable an equipment for all pursuits, whether technical or general.

The clearest and most concise text-books are sought for; abstruse and unprofitable discussions are avoided; original work is encouraged, and students are called on for personal recitations more frequently than in most institutions of similar character.

GEOLOGY AND MINERALOGY.

The treatment of Geology consists of text-book work, supplemented by frequent excursions in the field, in which the many interesting features of the region are examined. Colored maps, representing the geological formations of counties or larger sections, are required. Mineralogy is taken up in connection with Geology, the student being required to identify minerals by their physical properties. In connection with this work, each student is required to make a collection of fifty minerals, which he determines and classifies. To aid him in this work he is given instruction in Blow-pipe Analysis and Determinative Mineralogy. Through the generosity of the late Philander D. Bradford, the University has acquired a valuable collection of minerals.

HISTORY AND POLITICAL SCIENCE.

The course in History affords a connected and comprehensive view of the history of civilization from the earliest times to the present. By investigating the causes which underlie the world's history, the instruction aims, not only to train the memory and develop the reasoning faculties, but to fit men to deal wisely with those practical social questions of the present,

upon whose solution the experience of the past throws the most valuable light. Particular attention is given to the constitutional development of England and of the United States.

Political Economy is taught in the Senior year by means of text-books, lectures, and informal discussions. A theoretical view of the subject is followed by a practical study of Land and Labor Questions, Socialism, Finance, Public Credit, the Principles of Taxation, and Tariffs.

PSYCHOLOGY.

An examination of the different sources of knowledge, an analysis of the various mental states, and a classification of the faculties, are followed by a study of the relation of psychology to education, for the benefit of those students who may desire to engage in teaching. The laws governing the processes of acquiring and reproducing knowledge, the development of the faculties, together with the ways in which they interact one on another, and the play of motives, furnish the foundation of rational instruction and government, and are of special value to the teacher.

LOGIC.

Logic is taught by recitations and informal lectures. The objects of this study are to give the student vigorous mental discipline, training in exactness, and certainty in thinking, skill in detecting fallacy, and assistance in all the sciences by directing attention upon those points of method in each science, which the cultivator is apt to neglect in his zeal for the subject-matter of each.

The unfolding of the laws of thought by an analysis of the Notion, Judgment and Reason, is made the basis of many exercises in the opposition and conversion of propositions, logical division, definition, classification, analysis, synthesis, application of the rules of the syllogism to arguments, and the detection of fallacies. In Induction, the methods of scientific

investigation and proof are considered in connection with a study of the history of some one of the natural sciences.

MODERN LANGUAGES.

The chief aim of this department is to enable the student to read French and German with ease and fluency. By this method it is intended, not only to familiarize the ear with the spoken language, and thus to lay the best groundwork for conversation, but also to render easy and intelligible the grammar work and reading which follow.

After a thorough course in the essentials of grammar, accompanied with composition and the reading of easy prose, are read various selections of prose and poetry from the best authors.

Much attention is given to the relation of the languages to English and to each other, especially in the matter of derivative and cognate words.

To enrich the student's English vocabulary, to cultivate his taste for good literature, and to broaden his mental horizon, are further objects of the instruction.

RHETORIC, ENGLISH CRITICISM, AND ELOCUTION.

The instruction in this department aims to deal in the most practical way with the composition and delivery of good English. The work, which is uniform in all courses, is continuous throughout the four years.

In Rhetoric, to which subject is devoted two hours each week during the Freshman year, much of the time is spent in the application of the principles of Rhetoric to the correction of faulty sentences. This instruction is supplemented, during the remainder of the course, by lectures on the higher qualities of style, in connection with the essay work. As to punctuation, paragraphing, etc., students are required to present their essays and manuscript orations in proper form for publication.

In English Criticism, while it is sought to eradicate faults of style, especial attention is given to the development of the student's individuality and power of expression. An important feature is the critical examination of English prose masterpieces, which is made in connection with the study of English Literature. Essays and orations are carefully revised, returned to the writers for correction, and afterward read and criticised in class. That the student may learn to study his subject comprehensively, and to arrange its parts logically, instruction is given in the formation of essay outlines.

In Elocution, the chief ends sought are distinct and forcible utterance, just emphasis, and ease and naturalness of expression.

RHETORICALS.

Friday afternoon of each week is devoted by the entire corps of cadets to rhetorical exercises, in which each cadet is required to take part every third week. The exercises are varied, consisting of declamations, essays, orations, debates, presentation and acceptance speeches, etc. Much stress is laid upon the subject of extempore speaking. Each cadet is required to rehearse before a member of the faculty before appearing at rhetoricals. At the close of each rhetorical session, the members of the faculty make criticisms and suggestions upon the work done. Occasionally, in place of the regular rhetorical work, the corps organizes itself into a senate or other deliberative body, to gain familiarity with parliamentary law.

Experience has shown that four years of participation in these exercises insures, even to the diffident, that ease and fluency in public speaking which is so important a factor in the various walks of life.

BOTANY.

The course in Botany begins in the spring term of the

Junior year, and comprises Vegetable Morphology and Physiology, Plant Analysis, and the preparation of Herbaria.

The life history of vegetation is traced from seed through stems and roots, leaves, branches, buds, flowers and fruit, to seed again.

Gray's Lessons are used, with lectures and field-work. The fall term is devoted mainly to Classification and Histology. A few of the more difficult orders of Phænogams are studied. Attention is given to the various kinds of parasitic fungi so destructive to crops.

ZOOLOGY.

Structural Zoölogy is taught by recitations and by laboratory demonstrations. Dissections and drawings are made of representative species in each group of animals. The purpose of this course is to give the student a definite conception by means of sense-images of the characteristic structure of the leading modifications of the Animal Kingdom.

PHYSICS.

The treatment of Physics consists of text-book work, with frequent experiments. The work in Mechanics is still further treated under a separate head. Especial attention is given to Electricity and Magnetism, and the student is required to do actual work in wiring, etc., making computation of resistance in telegraph and electric light wires. He is also taught the principles of various electrical machines, and is encouraged to make models. The class is taken to visit electric plants, where the principles taught in the class room are practically applied.

CLASSICS.

It is the aim of the Classical Department to make the work as thorough as possible, and to give the student a general literary culture. A thorough knowledge of grammatical forms

is considered necessary, and especial attention is given during the first year to etymology and syntax, vocabulary and idioms. In this manner not only a thorough knowledge of the language is obtained, but the greatest possible amount of mental discipline is derived. The similarity between the Greek and Latin on the one hand and the English on the other is pointed out, and especial study is given to roots from which English words are derived. The course is designed to embrace all the leading classes of composition in Greek and Roman literature, and to afford accurate historical knowledge of the Greek and Latin characters and customs. Attention is given to right translation, and care is taken that the student translates into good English, that he may thus improve his knowledge of English in the study of the Classics.

CHEMISTRY.

The study of Chemistry is begun by students in all courses, except that of Arts, in the Freshman year. It consists during this year of lectures and recitations upon general Inorganic Chemistry, in which the principles of the science are brought out and fully explained. Following this is a description of the properties of elements and compounds, and of the methods used for preparing them. To bring this work more clearly before the student a large number of experiments are performed before the class, in many of which the students are permitted to assist.

In addition to the recitations, two hours a week are devoted to laboratory practice, in which the student performs for himself the experiments given in the section room. The second year's work is intended for those who take the Chemical Course, and consists of daily laboratory practice, together with recitations and lectures upon Chemical Technics. The work of this and of the following years is performed by the students themselves, under the direction of the professor and

his assistant. Qualitative examinations of minerals, commercial products, fertilizers, drugs and medicines, are made, and as the student becomes more advanced, quantitative examinations of the same substances are made. For those students desiring to fit themselves for the study of Medicine and Pharmacy, special instruction is provided in the Chemical Laboratory.

FINALLY.

It is the aim in all of the departments of the University to teach students the practical application of what they study. Mere theories are of little value unless the student can apply them successfully. Too many college graduates have failed in their professions from being unable to apply theory to practice, and it is this lack which we endeavor to supply in our students.

Brief Sketch of Norwich University.

This institution was founded in 1819, by Capt. Alden Partridge, of whom a cut appears in this Catalogue, and was known as the American Literary, Scientific, and Military Academy. It retained the name until November 6, 1834, when a charter of incorporation was granted it by the State of Vermont, under the name of Norwich University.

Thus was founded the FIRST Scientific, Classical, and Military College in the United States. This new departure met with universal favor, and its halls were soon crowded with young men from every State in the Union.

In March, 1866, the University buildings at Norwich were destroyed by fire, and the University was removed to Northfield, Vt., where the citizens had offered fine grounds and

commodious barracks. Here the same system of instruction and military discipline is maintained, and many young men have been enabled to go forth to fill high positions in various professions.

This was the first institution in the country to lay down a purely scientific course of study, and up to the time of the Rebellion the only one which embraced in its curriculum thorough Military, Classical, and Scientific courses. By her work for half a century, Norwich University merits the confidence of the public. Special attention having been given to Military Science and Engineering, her graduates have become particularly distinguished as army officers and civil engineers, some having risen to the foremost rank.

Scholarships.

Thirty State scholarships, covering tuition in any of the departments, are now available.

Young men residing in Vermont who may be desirous of obtaining a State scholarship should first apply to the Superintendent of the University for information as to whether a vacancy in their county exists. Learning of a vacancy, application should then be made to the Senators of the applicant's county.

In addition to the above there have been created twelve half-scholarships by the benevolent friends of the University.

Young men desiring to take advantage of the scholarships hereby offered should address the Superintendent at North-

General Information.

EXPENSES.

A prominent feature of the University is the very reasonable charges for instruction and the low expense of living. The charge is $85 per year, for instruction, room rent and incidentals. Students pay for board and laundry at the University Mess Hall $3.25 per week, which makes the whole expense less than the living expenses alone in cities, and at other institutions of learning.

The following table gives a statement of the expenses:—

Tuition per College Year	$65.00
Room rent	15.00
Library and Contingent Expenses	5.00
Board and Laundry, thirty-six weeks	117.00
Total for year	$202.00

Uniform complete, including Regulation Fatigue Suit and Dress Coat, Helmet and Fatigue Cap, $40.00.

The charge for room rent is based upon the supposition that two students occupy the same room. Rooms are unfurnished. Students bring bed linen, blankets and towels. Second hand furniture can be bought at low prices, and sold at a slight reduction.

A room can be furnished at a cost of from $10 upwards to each occupant.

Cadets who are appointed buglers receive $50 per year for their services.

Bills are payable strictly in advance.

Students in the course in Chemistry are required to deposit $10 at the beginning of each term of the Sophomore year, and

$15 at the beginning of each term of the Junior and Senior years, the amount not consumed being returned at the end of each term.

In the Engineering course in Qualitative Analysis, $3 is charged for chemicals in the second term of the Junior year. In the other courses a fee of $5 per term is charged for Qualitative Analysis, and $3 per term for Blow-pipe Analysis.

One dollar per term is charged members of the Freshman class taking the laboratory work in connection with Inorganic Chemistry, for chemicals.

These charges are for chemicals, and do not include breakages or waste of materials. The average expense for materials to students in the Chemical course is from $6 to $8 per term.

The Wells River railroad allows students half fare, and the Central Vermont carries students for two cents per mile on certificates, to be obtained through the Superintendent of the University.

For further information address either the ACTING PRESIDENT, or the Superintendent, at Northfield, Vt.

BUREAU OF INFORMATION.

There has recently been established by the University a Bureau of Information. It is intended that this Bureau shall serve in assisting graduates in obtaining desirable positions as Teachers, Engineers, Architects, Chemists, etc. Those of the Alumni who desire such positions should send their addresses to the Superintendent, that they may receive the benefit of the numerous applications for men, of which the University is constantly in receipt. The value of this feature is attested by the comparatively large number of graduates who, since its establishment, have found lucrative positions without trouble or expense to themselves.

THE REVEILLE.

The cadets conduct a monthly magazine devoted to the interests of the University, the Alumni, and the Corps itself. Upon this paper excellent drill in journalism is afforded the cadets.

READING ROOM.

A reading room is maintained by the cadets, which is provided with the leading literary, political, and technical periodicals of the day.

DODGE HALL.

Through the generosity of General Grenville M. Dodge and other friends, the Trustees have been enabled to erect a four-story brick building to meet the increasing needs of the University for section rooms and laboratories. This building is now completely furnished and equipped, and greatly adds to the facilities of the University.

DRILL HALL.

The University has recently acquired possession of a commodious building, which is used as a Drill Hall.

MESS HALL.

The University Mess Hall is a large building, in which several members of the Faculty with their families reside, and where they, with the corps of cadets, take their meals.

STUDENTS' SOCIETIES.

Two literary societies exist among the students, in which valuable literary work is done, while at the same time social privileges are enjoyed. These societies are in every way approved by the authorities.

STUDENTS ENTERING

should report upon arrival to the Superintendent, who will give them all necessary instructions as to examinations, etc. The Superintendent will also assign each new student to quarters in Cadet Barracks.

SPRING ENCAMPMENT.

The last two weeks of the spring term are spent in camp, and the Corps receives instruction in all the details of camp life, together with guard duty. While in camp a general review of all the drills is made to insure familiarity with them. During this encampment considerable time is devoted to attack and defence of camp, and to rifle practice.

EXTENDED MARCHES.

The encampment may be varied by extended marches about the State. During the encampment and on the march the Corps is at all times under the command of the Commandant of the University, who is responsible for the conduct of the Cadets.

RELIGIOUS FEATURES.

Prayers are held before the opening of academic exercises on each week-day morning. The following clergymen, who are active resident clergymen of the town, conduct morning exercises: Rev. William S. Hazen, D. D.; Rev. Sylvester Donaldson, and Rev. Homer White, S. T. D. On Sunday morning each cadet is required to attend divine service with some one of the village congregations, the choice being made at the beginning of the term by the cadet himself, if of age, or otherwise by his parents or guardians, and adhered to throughout the term. The societies of the village are: Congregation-

alist, Episcopal, Methodist, Roman Catholic and Universalist. While cadets are held to a strict observance of the rules for religious exercises, and while all immoralities are carefully guarded against, yet the institution is in every respect non-sectarian.

PRIZE SPEAKING.

Through the generosity of Mr. N. Louis Sheldon, class of '84, two prizes of $15 and $10, respectively, are offered to those members of the Sophomore and Freshman classes who show the greatest merit in declamation in a contest held during Commencement week. Prize winners in previous contests are debarred from competing.

HONORABLE MENTION.

The student having the highest general average in his class for the year, providing such average be at least 90 per cent, receives honorable mention at the annual Commencement, and the honor list is printed in the annual Catalogue.

SENIOR MEDALIST.

The member of the Senior class who graduates with the highest general study average, receives the Faculty Gold Medal.

COMMISSIONED OFFICERS.

Upon graduation cadet officers receive commissions signed by the President of the University, and by the Adjutant and Inspector-General of the State.

CONDITIONS.

A student deficient in work at the end of any year is not ranked with the next class until such work is made up. No

cadet is eligible for a commencement honor who has not made up all deficiencies before the first Monday of the spring term of his Senior year. The operation of this rule may be suspended by vote of the Faculty in those rare cases which warrant such action.

ENDOWMENT.

The plan for increased endowment, which has been presented to the friends of the University, has met with a hearty reception, and a considerable amount has already been subscribed. With the rapid growth of the institution, and the large increase in the number of students, new and greater demands are made upon her. To meet these demands a larger endowment will be necessary, and it is earnestly hoped that the Alumni and friends of Norwich University will do their part toward assisting the institution.

NORTHFIELD, VT., June 27, 1889.

A business meeting of the Alumni and Past Cadets of Norwich University was called to order at 4:30 P. M., with President Joseph Stedman in the chair.

Prof. J. B. Johnson, of Northfield, was elected to receive subscriptions and donations toward a permanent endowment fund, the income to be used for the current expenses of Norwich University and support of the Faculty, and to be held by him in trust for that purpose only, excepting that, if the University cease to exist, then in trust for the donors.

Further, said Johnson to give good and sufficient bonds for the faithful execution of his trust in a sum not less than $5,000, and with at least two responsible sureties. The bond as drawn and signed to be approved by J. C. B. Thayer, Treasurer of Norwich University.

Moneys and communications concerning endowment may be sent to the Trustee of the Fund, Prof. J. B. Johnson.

Throughout the history of the University there has been maintained a very high standard of Military excellence. From the first it has held the distinction of being the foremost Military institution in the land, with the exception of the National Academy. The following, from Gen. W. T. Sherman's speech before Ransom Post, St. Louis, Mo., will sustain the above statement regarding this University. In speaking of General T. E. G. Ransom, he says: "He became Principal of Norwich University, THEN, as SINCE, an Academy of great renown. This military school at one time almost rivaled the National Academy of West Point, and there many a man who afterward became famous in the Mexican and Civil wars, first drank in the inspirations of patriotism, and learned the lessons of the art of war." The reputation of the New England regiments must be attributed to discipline and instruction received at this institution, as much as to any other single factor; and the "Green Mountain Boys" owe their national reputation and success largely to their training within her halls. Her Honor Roll in the late Civil war contains the names of twelve Generals (among them Gens. Dodge, Buel, Seymour, Wright, Ransom); twenty-five Colonels, forty field officers, fifty-five Captains, one hundred and forty-three lieutenants, and a long list of non-commissioned officers. It has been the highest endeavor of the Trustees and Faculty to maintain in every respect the military reputation of the University. Attention to the course of Military Instruction will give a fair idea of the training given, and a copy of the Rules and Regulations will give a complete statement of the duties required of

General Statement.

Norwich University is distinctively a military institution, but it is in no way reformatory in its nature.

The aim of the institution is to maintain a regular routine of military duty, which affords most valuable training to the young man engaged in study.

While strictly maintaining the military system, the student is allowed every liberty consistent with the system. It is only when wilful infractions of properly constituted authority occur that the impersonal working of the military system exerts its corrective influence.

STANDING, MILITARY CUSTOMS, ETC.

Academic standing depends upon recitations; Military standing upon marks of merit and demerit, together with proficiency in military duties. Immoralities, technical and minor offences, are marked with demerits, and are punishable in other ways. Wherever purely academic duties require variation in special matters, the analogies of military usage are maintained, so far as practicable. The students are called cadets, and are under military discipline. The cadet officers are appointed on the basis of Military and Academic standing. Every cadet is required to wear the uniform of the University when on duty.

UNIFORMS.

A single-breasted dress coat of dark blue cloth, University buttons; trousers dark blue, with light red stripe; black cravat; standing collar; U. S. regulation helmet, with usual gilt ornament; forage cap; boots, or high shoes of black,

Sufficient time is given for students to wear out their citizen's suits before they are required to procure uniforms.

LIBRARY AND COLLECTIONS.

The University library is very well supplied with works of reference, and in addition contains many works of great value, which are not to be found in newer libraries. Our mineral collection is ample for the purpose of instruction. Manufacturers, dealers in building materials, and others are requested to send specimens of their products to the Department of Engineering. Specimens in Natural History, Minerals, etc., will be gladly received by the Superintendent. Alumni, Past Cadets, Authors, and Publishers are earnestly requested to contribute their publications to the University Library.

RECOGNITION BY STATE AND GENERAL GOVERNMENTS.

The fact that the State of Vermont has recognized Norwich University by making her Corps of Cadets a part of the State Militia and by granting her free scholarships, shows the extent to which the State government values the institution as a training school for the citizen soldier, and attests her gratitude for services already rendered. For like reasons the U. S. Government has detailed an active army officer for duty at the University as Professor of Military Science.

RESIDENT IN BARRACKS.

A member of the Faculty resides in the barracks with the cadets, thus insuring a strict observance of rules and regulations.

LOCATION.

Northfield being located on the main line of the Central Vermont railroad is easy of access from all directions, and

students are given reduced rates upon application. Telegraphic communication can be had directly with the University barracks, through the Western Union Company. There is probably no State that can boast of a more healthful climate than Vermont. Northfield is in the central part of the State, and is ten miles from the Capital, Montpelier. A popular resort in summer, it loses none of its healthfulness in winter. The water is pure and clear, and the University and village are well supplied from mountain springs.

Routine of Duty.

Reveille, 6:30 A. M.; Police Call and Inspection of Quarters, 7 A. M.; Breakfast, 7:30 A. M.; Prayers, 8:45 A. M.; Study and Recitation hours from 9 A. M. until 12 M.; Dinner, 12:15 P. M.

Afternoon Roll Call, 1:35 P. M.; Study and Recitation, from 1:45 P. M. until 3:45 P. M.; Drill, 4:10 P. M. until 5:10 P. M.; Supper, 5:30 P. M.; Retreat, 7 P. M.; Tattoo, 9:30 P. M.; Taps (Lights out), 10 P. M.

Retreat on Friday, Saturday, and Sunday nights at the formation for supper. On Friday and Saturday nights there is no tattoo; roll call and taps at 10:30 P. M.

SUNDAYS.

Police Call, 7:30 A. M.; Breakfast, 7:50 A. M.; Sunday Morning Inspection, 9:30 A. M.; Church, 10:30 A. M.; Dinner, 1:20 P. M.; Supper, 5 P. M.

On Friday nights there is release from quarters until 11 P. M. for Seniors, and until 10:30 P. M. for other Cadets.

On Saturday nights all Cadets are allowed to attend society meetings until 10:30 P. M. without permits.

Permits are granted to Cadets in good standing to go out for social purposes on Saturday or Sunday evening, as they may elect.

The foregoing routine is varied during the Spring Term and the Annual Encampment, as circumstances may render best.

The President with the concurrence of the Faculty periodically issues a detailed list of calls, and directs such additional roll-calls and makes such changes in the foregoing routine of duty as the discipline of the corps and changes in Academic and Military duty may necessitate.

Associate Alumni and Past Cadets.

By action of the Trustees, the Alumni and Past Cadets are entitled to elect one of the Board of Trustees each year. At a meeting held on Wednesday, June 26, 1889, it was decided that the meetings of the Association shall hereafter be held annually on the day preceding Commencement, at ten o'clock in the forenoon.

OFFICERS FOR 1892-'93.

President:
Charles Dole, '69, Northfield, Vt.

Vice-Presidents:
J. J. Dewey, '65.
Rev. Walter Dole, '70.
T. C. McIlvaine, '76.
F. L. Howe, '80.
A. F. Booth, '91.

Secretary and Trustee of the Alumni Endowment Fund:
J. B. Johnson, '79, Northfield, Vt.

Treasurer:
L. B. Johnson, '88, Northfield, Vt.

Committee on Increasing the Alumni Endowment Fund:
N. L. Sheldon, '84, Boston, Mass.
D. E. Wilmarth, '84, Boston, Mass.
R. L. Irish, '89, Brooklyn, N. Y.

Members of the Association not present may vote by written ballot at the annual election of Trustees. It is therefore important that each Past Cadet keep the Secretary informed of his full address, and notify him promptly of any change.

Boston Alumni Association.

ANNUAL REUNION IN BOSTON.

OFFICERS FOR 1893.

President:
George W. Hobbs, Esq., '57.

Vice-Presidents:
HON. G. H. HATHAWAY, '27.
WM. R. CUTTER, '69.
W. E. HASSAM, '87.

Secretary:
N. L. SHELDON, ESQ., '84, Boston, 146 Franklin St.

Treasurer:
GEORGE D. THOMAS, '76.

Endowment Fund Committee:
J. Q. A. MCCOLLESTER, '56.
G. D. THOMAS, '76.
N. L. SHELDON, '84.
J. K. EGERTON, ESQ.
REV. HOWARD F. HILL, '67.

NEW YORK ALUMNI ASSOCIATION.

ANNUAL REUNION IN NEW YORK CITY.

OFFICERS FOR 1892.

President:
GRENVILLE M. DODGE, '53.

Vice-Presidents:
CYRUS H. FAY, '37.
CLAYTON E. RICH, '63.
WILLIAM R. MEAD, '64.
WILLIAM R. RUMBAUGH, '76.

Secretary and Treasurer:
GEORGE R. MINER, '83.
(Address, New York *Herald*.)

Graduates of 1890.

C. F. PARKER,
Civil Engineer, with J. W. Ellis, Woonsocket, R. I.
C. E. COLLINS,
Civil Engineer for Pittsfield, Mass.
S. B. ADAMS,
Boiler Inspector, Boston, Mass.
D. W. LEWIS,
Clerk, Boston and Maine Railway.
HERMAN DRESSEL, JR.,
Principal North Bennington High School.
H. J. DANE.
Pharmacist, Chicago, Ill.
I. R. MOWER.
Pharmacist, Chicago, Ill.
J. H. JUDKINS,
Physician, Northfield, Vt.

Graduates of 1891.

GEORGE FRANKLIN ABBOTT,
Assistant Civil Engineer, West End Street Railway, Boston.
ALFRED FREDERICK BOOTH,
Assistant Principal, Northfield Graded School.
EDWARD AIKIN SHUTTLEWORTH,
2d Lieut. 11th Inft., U. S. Army.
WILLIAM HIBBARD SPRAGUE,
Law Student, Montpelier, Vt.
HARRY GORDON WOODRUFF,
Cashier First National Bank, Chelsea.
ETHAN ALLEN SHAW,
Instructor in Normal School, Randolph, Vt.
CARL GILMAN DOLE,
Stenographer, West Superior, Wis.

HEBER CALVIN CADY,
Assistant Cashier Northfield Savings Bank.
BURTON WILEY FARNHAM,
Assistant Civil Engineer in City Engineer's office,
Lowell, Mass.
FRED MINER GOODHUE,
Assistant Hydraulic Engineer,
Department of Locks and Canals, Lowell, Mass.
PERCY GATES SMITH,
Assistant Engineer, S. S. & E. B. Railway.
CLARENCE BENNETT RIGGS,
Division Engineer, Black River (Vt.) Railway.

Graduates of 1892.

E. W. CLARK.
Draftsman, Boston Bridge Company.
J. S. CRAIGUE,
Assistant Engineer, Boston Board of Survey.
C. J. C. EVANS,
Assistant Engineer, with J. W. Ellis, Woonsocket, R. I.
C. W. PIERCE,
Associate Editor of the Bennington *Banner*.
R. H. FORD,
Civil Engineer, Central Vermont Railway.
E. H. RYAN,
Assistant Hydraulic Engineer, Lowell, Mass.
D. C. WEBB,
Book-keeper with L. H. Webb, Braintree, Vt.
B. W. GLEASON,
Dealer in Real Estate, Boston, Mass.

HONOR LIST, 1892.

Valedictorian,
EDMUND H. RYAN.

Salutatorian,
EPHRAIM W. CLARK.
Senior Gold Medalist,
EDMUND H. RYAN.

HONORABLE MENTION.

EDMUND H. RYAN, '92.
EBEN W. GAYNOR, '93.
LEROY C. HULBURD, '94.
WALTER G. HUNTLEY, '95.

WINNERS IN PRIZE SPEAKING.

1st Prize, WALTER G. HUNTLEY, '95.
2d Prize, B. H. PRIOR, '95.

BATTALION ORGANIZATION.

)ERICK CLARK KIMBALL, 2d Lieut., 5th U. S. Infa
Commandant.

:K DUDLEY HOLBROOK, Cadet 1st Lieut. and Adju

IGE LESLIE ANDREWS, Cadet 1st Lieut. and Qu
master.

FRANK ALBERT GOKEY, Cadet Sergeant-Major.

CADET COMPANIES.

"A."

. FRANK ALDEN MANUEL.
1st Lieut. EBEN WATSON GAYNOR.
2d Lieut. WILBUR EDSON HURI

Roster.

SENIOR CLASS.

George Leslie Andrews, - - - - Gouldsville.
Edward Cushman Bennett, - - - - Bennington.
Eben Watson Gaynor, - - - - Gouldsville.
Frank Dudley Holbrook, - - - - - Newport.
Wilbur Edson Hurlbut, - - - - - Georgia.
Frank Alden Manuel, - - - - - North Troy.
Hiram Nathaniel Mattison, - - - - Shaftsbury.
Orren Luther Pease, - - - - - Hartford.

JUNIOR CLASS.

Leo Bertram Clogston, - - - - South Royalton.
Herman Arthur Gillette, - - - - Huntington.
Frank Albert Gokey, - - - - - Northfield.
Harvey Levi Hinman, - - North Stratford, N. H.
Howard Clinton Holden, - - - - - Barre.
LeRoy Chittenden Hulburd, - - Brasher Falls, N. Y.
William Hazelton Rollo, - - - - St. Albans.
Raymond Underwood Smith, - - - Wells River.
Harlan Badger Wason, - - - Methuen, Mass.
George Duff Whiteside, - - - - - Vergennes.

SOPHOMORE CLASS.

Lester Hazen Bradley, - - - - Ilion, N. Y.
Edgar Fletcher Carruthers, - - - Bellows Falls.
Charles Horace Davis, - - - - - Northfield.
Fred Carnot Davis, - - - - - Northfield.

Frank James Donahue, - - - - - Proctor.
George Donnelly, - - - - - - Bennington.
Ray Storrs Dow, - - - - - Sycamore, Ill.
Ernest Willard Gibson, - - - - - Londonderry.
Philo Remington Hoefler, - - - - Ilion, N. Y.
Walter George Huntley, - - - - Northfield.
Sheridan David McAllister, - - - - Warren.
George Soter Miller, - - - - Lowell, Mass.
Harry Chester Moseley, - - - - - Northfield.
Bert Henry Prior, - - - - - - Underhill.
James Ernest Ross, - - - - Ellendale, N. D.
Michael John Ryan, - - - - - Gouldsville.
George Eber Storrs, - - - - - Island Pond.
Hal Holmes Stearns, - - - - Winthrop, N. Y.
Samuel Charles Yeaton, - - - Brooklyn, N. Y.

FRESHMAN CLASS.

Arthur Gilbert Andrews, - - - - Northfield.
James Leland Averill, - - - - - Northfield.
Roy Davenport Baker, - - - North Adams, Mass.
William Preston Beauclerk, - - - - Irasburgh.
George Horace Briggs, - - - - - Northfield.
Charles Howard Brooks, - - - - - Northfield.
William Granville Brooks, - - - - Northfield.
Walter Brown, - - - - - - - Northfield.
Charles Sargent Carleton, - - Cumberland Mills, Me.
Herbert Sawyer Clark, - - - - - Northfield.
John Leslie Collins, - - - - - Northfield.
Arthur Hall Cushman, - - - North Bennington.
Harry Ray Dole, - - - - - - Northfield.
Willard Dudley Emery, - - - - Montpelier.
Gardner Gates, - - - - - - Cambridge.
John Albert Holmes, - - - Haydenville, Mass.
Phil Sheridan Howes, - - - - - Northfield.

Harry Christopher Kerr, - - - - - Granville.
Edward Michael McCarty, - - - - Windsor.
Charles Albert Plumley, - - - - - Northfield.
Carroll John Scribner, - - - - - - Stowe.
Leon Anson Skinner, - - - - South Royalton.
Charles Almont Stevens, - - - - Gouldsville.
Fred B. Thomas, - - - - - - Stowe.
Samuel Adrian Thomas, - - - - - Stowe.
Dean Clyde Warren, - - - - - Stowe.
Frank Robert Wright, - - - - - Newport.
George Frederick Wright, - - Springfield, Mass.

Calendar, 1892-'93-'94.

FALL TERM, 1892.

September 22, Thursday:—Entrance Examinations and Registration.
December 19–22:—Term Examinations.
December 22, Thursday:—Term ends.

WINTER TERM, 1893.

January 5, Thursday:—Entrance Examinations and Registration.
February 22, Wednesday:—Washington's Birthday.
March 20–23:—Term Examinations.
March 23, Thursday:—Term ends.

SPRING TERM, 1893.

April 6, Thursday :—Entrance Examinations and Registration.
May 10, Wednesday :—Seniors will present graduation theses.
May 30, Tuesday :—Memorial Day.
June 1, Thursday :—Senior Examinations.
June 12–17 :—Final Examinations.
June 19 :—Annual Encampment begins.
June 25 :—Baccalaureate Sermon.
June 27, Tuesday :—Sheldon Prize Speaking.
June 28, Wednesday :—Annual Meeting of Trustees. Alumni Exercises.
June 29, Thursday :—Annual Commencement.
June 30, Friday :—Entrance Examinations.

FALL TERM, 1893.

September 21, Thursday :—Entrance Examinations and Registration.
December 18–21 :—Term Examinations.
December 21, Thursday :—Term ends.

WINTER TERM, 1894.

January 4, Thursday :—Entrance Examinations and Registration.
February 22, Thursday :—Washington's Birthday.
March 19–22 :—Term Examinations.
March 22, Thursday :—Term ends.

April 5, Thursday:—Entrance Examinations and Registration.

May 10, Thursday:—Seniors will present graduation theses.

May 30, Wednesday:—Memorial Day.

June 1, Friday:—Senior Examinations.

June 11–16:—Final Examinations.

June 18:—Annual Encampment begins.

June 24:—Baccalaureate Sermon.

June 26, Tuesday:—Sheldon Prize Speaking.

June 27, Wednesday:—Annual Meeting of Trustees. Alumni











